THE VALUE OF THE DAY BED UNIT IN GENERAL HOSPITAL PRACTICE

I W KEMP MB, ChB., Dip. Soc. Med., D. Obst. RCOG

MD

University of Edinburgh

1973

ACKNOWLEDGEMENTS

I wish to acknowledge with gratitude the valuable advice and help given by the following:-

Professor S L Morrison

Mrs Gillian Stanley

Mr Stanley Sklaroff

Mrs Emma Sklaroff

Mrs Vera Carstairs

Dr Hamish Mercer

The Staff of the Day Bed Unit, Victoria Hospital, Kirkcaldy

The Staff of the Department of Gynaecology, The Royal Infirmary of Edinburgh

The Staff of the Data Processing Department, Department of Social Medicine, University of Edinburgh

The Staff of the Data Processing and Computer Department, South Eastern Regional Hospital Board

Dr Marie Louise Levy, The George Washington University Hospital, Washington DC, USA

Dr D D Cohen, University of California, Los Angeles Centre for Health Services, Los Angeles, USA

The Hospital Secretary, Shotley Bridge General Hospital, Co Durham

The Hospital Secretary, Stoke-on-Trent General Hospital, Staffs

The Staff of the Research and Intelligence Unit, Scottish Home and Health Department

Miss Spence and Staff, HMSO

Dr Wendy L Kemp

CONTENTS

CONTENTS (Contd)

LIST OF TABLES AND FIGURES

FIGURES

EXPLANATORY NOTES AND ABBREVIATIONS USED

Table Percentages are correct to one decimal place. Percentage Totals may not add to 100.0 due to "rounding up".

PATIENT ATTENDANCES - In the main survey of the work of Kirkcaldy Day Bed Unit during the year ending 31 May 1969 a record form was completed for each patient attendance, and not for each patient. (A number of patients attended more than once during the year).

In the patient follow-up Surveys - the KDBU Follow-up Survey and the Gynaecology Follow-up Survey - the number of patients was recorded.

Abbreviations

DBU	=	Day Bed Unit
KDBU	=	Kirkcaldy Day Bed Unit
D & C/C	=	Dilatation of Cervix and Curettage of Uterus and/or Cautery of Cervix
BWO with x-Ray	=	Bowel Wash Out - prior to x-Ray of Bowel using Contrast Media
ECT	=	Electro-convulsive therapy

SUMMARY

THE VALUE OF THE DAY BED UNIT IN GENERAL HOSPITAL PRACTICE

Day bed care in general hospital practice may be defined as a method of hospital treatment and investigation in which

1. the patient is not formally admitted to the hospital
2. the duration of stay does not normally exceed 12 hours and the period of treatment begins and ends on the same day
3. the use of beds forms an integral part of the system of care.

In recent years, the published accounts of day bed care, notably those of Farquharson, Stephens and Dudley, have aroused interest in the system and have played some part in stimulating the introduction of day bed units in several parts of the country. These are units specifically designed for the conducting of operations and investigations on a day basis.

Day bed care is now carried out in many hospitals throughout the country. To what extent does the present content of the work carried out in the new day bed units reflect or depart from the ideas put forward by Farquharson, Stephens and Dudley? This question is explored in terms of procedures carried out and in the quality of care given in the day bed unit at Victoria Hospital, Kirkcaldy and at other day bed units in this country and in the USA.

Information for the studies was obtained from the following sources:-

i. A record sheet containing personal, social and clinical data for each patient/treatment in the day bed unit at Kirkcaldy during the year ending 31 May 1969.

ii. Patient case records in Victoria Hospital, Kirkcaldy.

iii. A computer print-out of short-stay cases treated in Victoria Hospital, Kirkcaldy in 1966.

iv. In-patient operating theatre record books, Victoria Hospital, Kirkcaldy.

v. A questionnaire follow-up survey of patients in the day bed unit at Kirkcaldy and in the Gynaecology Department, Royal Infirmary of Edinburgh.

An examination was made of the selection of patients and standards of care in which "intermediate" types of procedure were carried out. In comparison with these, current procedures in the day bed unit at Kirkcaldy were found to be of a "minor" variety.

The organisation and facilities of the day bed unit at Kirkcaldy were described and the effect of the establishment of the unit on the work of the hospital examined.

The demographic and social characteristics of the patients treated at the day bed unit were then examined in the context of studies of the reaction of patients to day bed care.

These studies suggested that certain requirements are necessary to meet a satisfactory standard of care for many procedures currently carried out in the day bed units. These requirements are: a clinical and social assessment of suitability for day bed care with special reference to the age of the patient, the presence of someone able to give or summon help during the immediate post-treatment period and adequate home sanitary and bathing facilities.

Requirements for hospital care include a good reception system, treatment facilities allocated specifically for day bed use and adequate rest, sanitary and clothes changing/storage facilities. Sufficient information concerning the treatment should be given to the patient prior to leaving hospital who should have a quick and comfortable means of travelling home.

Provision for home care should include the giving of timely information to the district nurse service and the family doctor from whom support at home is often required.

In view of the short period spent by the patient in hospital an efficient means of giving information to the patient both before, during and after admission is essential.

With regard to possible future developments in day bed unit care it is believed that greater flexibility in day bed unit management would be achieved if a proportion of beds were retained for overnight care. These would be for patients undergoing procedures likely to produce unpleasant after-effects and for the patient who is less well following any procedure.

Two other lines of investigation are explored. One is the possible extension of day bed care for more severe types of procedure. The other is the possibility of general practitioners carrying out treatment in these units.

INTRODUCTION

Planned short stay care is assuming increasing importance in general hospital practice in this country and abroad. Its growth is rooted in pressures which are social and economic as well as clinical in character. The purpose designed day bed unit is the latest stage in this development.

Planned short stay may be applied to any system of general hospital care in which admission, treatment and discharge are planned, in co-operation with the patient, to take place within a fixed period of time. The term 'short' is not precisely definable here, but may be reasonably applied to a duration of up to five days in hospital.

(Specialised forms of short stay general hospital treatment such as renal dialysis are not considered here.)

Day bed care in general hospital practice may be regarded as a method of hospital treatment and investigation in which:-

1. the patient is not formally admitted to the hospital;
2. the duration of stay does not normally exceed 12 hours and the period of treatment begins and ends on the same day;
3. the use of beds forms an integral part of the system of care.

Many hospitals have practised the system for many years especially in the fields of general surgery and urology and recently in gynaecology. Accounts of day bed care in general surgery, published by Farquharson (1955) Stephens and Dudley (1961) Caridis and Mathieson (1964), have aroused considerable interest in this country. These have indicated the types of care considered suitable and the standards

required in patient selection and post-operative care. These published accounts of day bed care in general surgery undoubtedly played some part in stimulating the introduction of day bed units in several areas of the country. These units are specifically designed for operations and investigations on a day basis. They are multi-specialty in nature and situated in association with a general hospital.

The first objective of this study was to establish the place of the day bed unit in clinical practice in terms of the treatment and investigations which might be carried out using the system.

The second objective was to establish the requirements in terms of facilities, organisation and standards of care in relation to the various procedures carried out.

The third objective was an attempt to foresee the lines along which day bed care might be developed.

The evolution of short stay care to the present day bed unit system is examined. The range of procedures, the organisation and standards of the various published systems of short stay care are studied wherever they were relevant to day bed care.

The work of modern day bed units is then presented with particular reference to the day bed unit at Victoria Hospital, Kirkcaldy. An appraisal of the organisation and facilities is carried out and the range and type of procedures studied and compared with those conducted in other day bed units. The effect on the work of the hospital of carrying out these procedures in the unit is then examined.

The demographic and social characteristics of the patients and their reaction to the system are considered. An attempt is made to identify groups of patients who might require special care and facilities.

With this information the requirements necessary to meet a satisfactory standard of care for procedures currently carried out in day bed units are suggested. Finally the requirements for possible future extensions in the range of care carried out by the system of day care are discussed.

PART 1 THE EVOLUTION OF DAY BED CARE

CHAPTER I.1

THE HISTORICAL CASE FOR SHORT STAY AND DAY BED CARE

Although the day bed system of hospital care is of relatively recent origin, it is nevertheless part of an evolutionary process which began over fifty years ago with the movement towards early ambulation of patients in hospital suffering from a variety of clinical conditions and undergoing a variety of surgical operations. The movement had its origins in a realisation amongst clinicians that there were dangers in prolonged bed rest. This was later summed up in a phrase used by Dunlop in 1949 - "complete rest in bed should be prescribed like a dangerous drug."

The next stage following early ambulation was almost inevitably towards a shortening in the duration of stay in hospital. The arguments for and against day bed care must therefore be seen against those concerning early ambulation and short stay in hospital and the change in the climate of medical and surgical opinion which these eventually produced.

Goodall (1951) has pointed out that early ambulation cannot be exactly defined. Nelson (1944) referred to the term as representing the 72 hour period immediately following operation, but this would have been considered late by Leithauser (1946) who got his surgical patients up as soon as they came round from the anaesthetic. In fact, both may be regarded as examples of early ambulation, Leithauser's system being a more extreme form. Thus Goodall postulated that a system of early ambulation was being practised when

physiotherapy and bed exercises were used as substitutes for the extremes of forced ambulation. He included examples of this modified form of early ambulation in the survey which he conducted in this field.

It was inevitable that the question of early discharge from hospital should be raised among those who practised early ambulation. The case for shortening the duration of stay in hospital has been made in the published literature. The aim, common to all the exponents, was to produce a planned system of treatment in which the patient was kept in hospital no longer than was necessary to maintain a high standard of care.

Again, there was no fixed duration of stay universally advocated even when the procedures carried out were identical. Among the durations of stay suggested was that of day care, in which the patient was admitted, treated and discharged home on the same day.

The steps in the evolution towards day care did not always occur in the order given above. Thus certain surgeons, Nicoll in 1909 and Fullerton in 1913, were reporting on quite major surgery conducted on a day basis at a time when the question of early ambulation had hardly been considered by the majority of surgeons. However, the argument for early ambulation began approximately at the beginning of this century and had found favour with many hospital clinicians by the mid-century following a revival of interest in the method in World War II. The argument in favour of short stay care, including day care, came to the fore after this period. It still continues with the development of ideas for the domiciliary AND hospital organisation required to operate the system successfully.

Early Ambulation

Arguments employed in favour of early ambulation, shorter duration in hospital and planned short stay care were clinical, economic and social. The arguments associated with early ambulation emphasised the clinical advantages.

In 1899 Emil Ries pointed out advantages for getting patients out of bed within 24-48 hours following vaginal coeliotomy. The patients were considerably stronger. They had a low incidence of post-operative complications and demonstrated no ill-effects from early rising. In effect recovery was more rapid and complete.

Further work was published on early ambulation by Boldt (1907) and Hartog (1909) in America and in Germany by Kummell (1908). In Glasgow, Nicoll (1909 and 1913) and Campbell (1909) and in Belfast, Fullerton (1913) were not only operating on children in the out-patient department but sending them home on the same day to convalesce.

In Europe, early ambulation was practised extensively from this time, but in the United States the method was not developed until Leithauser and Bergo, reporting in 1941 a series of 436 surgical cases, marked a revival of interest. In that country in 1945, Schafer and Dragstedt described how they let their surgical patients up on the first to third post-operative day. They considered that early rising was now possible because of improvement in surgical technique.

Leithauser reported again in 1946, describing a series of over 2000 cases from which he concluded that surgical patients should be got

up as soon as they came round from the anaesthetic which might be 3-4 hours after operation. These views were confirmed by Burch and Bradley (1947) who found that early ambulation did not affect abdominal operational wounds adversely but led to a better nutritional state, and a lower incidence of complications favouring disruption such as vomiting, cough, distention and urinary retention.

In the period immediately after the Second World War early ambulation was practised in adult general surgery, paediatric surgery, gynaecology and obstetrics.

We have already seen that Nicoll and Campbell and Fullerton were pioneering out-patient surgery in children early in the century, but there was no further published work until 1944 when Nelson commented on the excellent healing and low incidence of post-operative complications in children who were unrestrained after operation.

In gynaecology, Trice in 1947, propounded that there were only two contraindications to early ambulation - clinically profound shock and prediction of fatal outcome, while Steinhart (1946) concluded that early ambulation in gynaecology reduced post-operative invalidism, both psychically and physically and resulted in more rapid convalescence.

In obstetrics the process of early ambulation was stimulated in London at least by an external factor. The bombing influenced obstetricians there to get patients up in 24 hours and to go home on the third day on account of the fear of casualties (Cullen 1947). In this instance the supposed clinical 'risk' to patients was more than balanced in these clinicians' minds by the physical risk of being

in hospital in central London at that time. Others who reported favourably on the practice of early rising in obstetrics were Rotstein (1944), de Soldenhoff (1948) and Swarbreck (1950). Swarbreck sounded one note of warning - early rising in domiciliary practice had to be watched carefully because the "patient's urge to meet her domestic obligations is irresistable".

One of the most outspoken critics of prolonged bed rest for patients in general was Asher (1944) who affirmed that there was hardly any part of the body which was immune from its dangers. Examples of these dangers were; hypostatic pneumonia; thrombosis and thrombo-embolism; bedsores; foot drop and stiffness and flexion of knee joints; disuse osteoporosis; urinary calculi and urinary retention; digestive upsets and constipation; lastly, the demoralising effects which were by no means unimportant.

Attempts were also made at this time to evaluate ambulation after operation by comparing the results of late and early ambulation.

In 1946, Blodgett and Beattie reported a study in which the complications arising from early post-operative rising and walking (in this instance, on the first or second post-operative day) were compared with those arising from a control series of patients who remained in bed at least one week after operation. The operations performed were on the biliary tract, stomach, duodenum and spleen, - 681 cases being analysed.

In the early rising group of patients the incidence of complications was lower, with the exception of deep leg vein thrombosis. The patients in this group were also considerably stronger and had less pain in their wounds.

In 1953, Palumbo et al compared early and late ambulation in a group of 2955 male patients who had had major surgery performed. They concluded that early ambulation resulted in a more rapid rehabilitation of the patient, a shorter hospital stay, a significant reduction of the number of complications, a favourable healing of wounds with no increase in the incidence of post-operative hernias or wound disruptions and lowering of post-operative mortality rate. They also found economic advantages in a great saving in the cost of patient care and the permitting of a more efficient bed utilisation because of the rapid patient turnover.

In 1947 the Lancet expressed the favourable opinion of many doctors towards early ambulation commenting that, 'the greatest strain to which a recently sutured abdominal wall or inguinal canal can be put, is in trying to defaecate into a bedpan'. An editorial in the same journal in 1951 traced the reluctance to adopt early ambulation following operation to "the followers of Lister, reared on the teaching of bacteriology and immunity and who seemed to look on Nature as an amiable half-wit who must be prevented from ruining their operation".

In 1948, the BMJ advocated getting out of bed by the third or fourth day after operation but added that many might with advantage get

up even earlier and reminded readers of the fact that Dr Ephraim McDowell, who did the first successful ovariotomy in 1809, found his patient up making her bed on the fifth day after the operation.

However, opinion was alive to the dangers of early discharge from hospital. The same article commented on the danger associated with the practice of early rising being the excuse for too early discharge of the patient. It quoted a number of occasions when fatal embolism or development of 'white leg' occurred after early discharge from hospital and stated that any surgeon who allowed a patient to leave hospital within 14 days of an abdominal operation would be in a difficult position should complications develop. While the Lancet editorial of 1951 affirmed that a minimum period of ten days in almost any surgical condition should be spent in hospital and deprecated the practice of Leithauser by which, "not merely did he push his patients out of bed as soon as they were conscious; he pushed them out of hospital as soon as they could totter". (Leithauser recorded an average stay of 1.9 days in hospital following interval appendicectomy).

We now come to the views on early ambulation expressed by Farquharson (1955), a key figure in the history of day surgery. He strongly advocated the case for early ambulation from three points of view.

i. Wound Healing

ii. Vital Functions

iii. Patient's Morale

i. Wound Healing

Farquharson argued that to allow the patient to rise with assistance from his bed and to walk across the ward, imposed no greater strain on his wound. "Whatever the patient may fear, wounds do not disrupt as the result of early ambulation."

Quoting the evidence of Blodgett and Beattie (1946) and Burch and Bradley (1947) that wound healing is actually accelerated by a reasonable degree of activity he concluded that the same may well apply to the healing of incisions and anastomoses in the gut, and that ambulation might well prevent the strain on the suture line of the gut caused by distension of the gut.

ii. Vital Functions

Farquharson affirmed that complications which constitute morbidity and mortality after operation are usually remote from the actual wound. They affect rather the muscular structures involved in respiration, circulation and digestion.

He quoted the danger of atelectasis due to shallow respiration and the reduction of vital capacity.

Farquharson stressed the importance of stasis of the venous blood-flow in the production of thrombosis and pulmonary embolus and in the production of primary pulmonary infarction and the consequent need to shorten the period of bed to the minimum as a preventive.

iii. Patient's Morale

Farquharson thought that the effect of early ambulation on the patient's morale was incalculable. He emphasised the confidence engendered in the patient on being told he could get up on the

evening of the operation now realising that he was no longer an invalid.

However not all authorities believed in the efficacy of early ambulation in preventing post-operative complications such as thrombo-embolism. Thus de Bakey noted in 1954 that there was no significant decrease in the occurrence of thrombo embolism despite the great revival in early ambulation, in many large institutions in which the method had been faithfully employed during the previous decade. Indeed, in many of these institutions there was an actual increase. Farquharson however considered that this could be explained in part at least, by the different interpretations of the term "early". Palumbo et al (1952 and 1953) were quoted by Farquharson as having shown that the incidence of thrombosis was indeed considerably reduced by early ambulation - but only if this was put into operation within 48 hours of surgery. That really early ambulation would prevent thrombosis had been borne out in Farquharson's experience of inguinal herniorrhaphy performed on an out-patient basis; in 485 patients so treated there were no thrombotic complications.

In the United States, Powers (1958) thought that while early ambulation did not influence the incidence of post-operative thrombosis it might prevent the formation of a thrombus of sufficient size to precipitate massive embolism.

By the end of the Second World War, many clinicians were now convinced of the clinical benefits to be gained from early ambulation. The next logical step in the minds of some was the early discharge from hospital following treatment of certain conditions.

In summary, the arguments in favour of early ambulation were mainly clinical. The patient's physical and mental state were considered. The physical advantages included not only accelerated local healing, but also a lowering of the danger of other complications. An improvement in the patient's morale was the principal advantage noted in the mental state.

The clinical disadvantage of early ambulation, noted by de Bakey in particular, was the increased chance of thrombo-embolus, an argument specifically refuted by Farquharson from his own surgical experience.

Early Discharge from Hospital - The General Argument

While the arguments in favour of early ambulation were almost wholly clinical in nature, those led in support of early discharge from hospital were often social and economic.

Farquharson (1955) noted that many of these who were most enthusiastic about early ambulation insisted, however, that it should not be made a pretext for too early a discharge of the patient from hospital. On the necessity for a 14 day stay in hospital, he commented, "Are we to admit then, rather shamefacedly, that our main reason for keeping our ambulant patients in hospital is to protect ourselves against possible litigation, and, in the light of our long waiting lists, is this attitude defensible?"

He considered that should such complications develop it would be possible to maintain that they were in no way due to, or aggravated by, the patient's discharge from hospital, and to reject in good faith any accusations of negligence. Certainly few surgeons would insist now on a stay of 14 days in hospital, but the fear of litigation certainly remains; there is the fear of the slipped ligature with the patient outwith the reach of immediate skilled surgical aid.

The same worry described by Farquharson was expressed by Fullerton in 1909 in the discussion which followed Nicoll's paper (1909) setting forth his system of out-patient surgery in children. Fullerton went on - "Supposing, for instance, he had operated on a case of hernia in the out-patient theatre, and that child died from sepsis or other cause, a little awkwardness might arise with a jury, especially if a medical man called to see the case made the statement that the child ought to have been kept in hospital." Fullerton changed this

opinion, writing in 1913 - "So convinced was I, however, by Mr Nicoll's results that I immediately began to add hernia and hydrocoele to the list of my out-patient operations, and my colleagues followed the same course".

In developing the argument in favour of early discharge, Farquharson emphasised how much more comfortable patients are and how much speedier their recovery if, their home conditions being suitable, they were at their own firesides. He agreed with Goodall (1951) that even the best equipped modern hospitals make little provision for the ambulant patient.

The need for patients to remain in hospital has been examined by several workers. Their comments have helped to alter the climate of opinion in favour of early discharge.

From a study of a series of patients discharged from or dying in the medical ward of a Birmingham general hospital Crombie and Cross (1959) concluded that one quarter of the patients "had no diagnostic or therapeutic requirements at hospital level" while Forsyth and Logan (1960) estimated that one quarter of the males and two fifths of the females in adult medical wards were "not, on clinical grounds alone, in need of in-patient care". Mackintosh et al (1961) in a study of patients in medical wards found the proportion of patients who could be discharged to be somewhat less - 4% were considered not to have needed admission on medical grounds.

The need to retain patients in hospital was further questioned by Heasman (1964) in studies on the variability in the duration of stay

in hospital for similar conditions between different hospitals and surgeons. Heasman showed how duration of stay in hospital for general surgical patients could vary widely between individual hospital groups and also between hospital regions. He presumed that the training of the surgeon, together with his personal experience and the pressure on beds were the most important reasons for the variations. Heasman called for statistically controlled studies to show objectively the effect of different lengths of stay in hospital for uncomplicated cases.

Such a study was carried out by Morris, Ward and Handyside (1968) in a controlled trial by comparing periods of hospital stay of one day and six days after operation for the repair of inguinal hernia. They found that early discharge of selected patients was in no way detrimental to their post-operative progress and did not produce any unforeseen increase in the work-load of the general practitioners.

In a study reported in 1960, Pollard and Summerskill investigated the ideal duration of hospital treatment after haematemesis or melaena from peptic ulcer once massive bleeds had stopped, by comparing two groups of patients, one mobilized immediately major bleeding ceased and the other kept in bed and therefore also in hospital for one week longer. They found that the rapidly mobilised group progressed in every respect as well as those kept in bed a week longer.

Campbell and Dudley (1964) have analysed the reasons for overlong stay following hernia, varicose vein and haemorrhoid operations. The known reasons were clinical, surgical and social.

1. medical - ie not concerned with the operation, but with some other disease or condition.

2. surgical - ie directly related to the operation such as deep-vein thrombosis.

3. social - ie home circumstances precluded early discharge.

4. undetermined - ie probably arising from failure to secure scheduled operating time because of demands of emergencies or neglect to discharge at a proper time.

In this series discharge was delayed in 13% of patients as a whole. In 7% delay was caused by medical or surgical reasons and in 6% by social or undetermined reasons. They argued that there was room for shortening the time further, asserting that post-operative complications and the comfort of the patient after various types of haemorrhoidectomy in particular still required much fuller evaluation by controlled trial. They also advocated frequent scrutiny of a running record of lengths of stay in order to induce a greater awareness of the problem.

Brotherston (1963) in reviewing research on medical care services to keep patients out of hospital pointed to the economic argument in reference to most kinds of acute sickness. The costs of providing and maintaining a high-standard bed were so great that only good medical reasons could justify its use. In applying this argument to acute illness he affirmed that it became cheaper to centralise costs in an institution than to provide everything for one patient in his home.

The other argument which he applied was "that hospitals are good places to keep out of anyway. In other words, ambulatory medical care, other things being equal, is better medical care."

Arguing the need to discharge patients from hospital as soon as possible Stallworthy (1960) observed, "To serve hot dogs at a shilling a time in the Savoy Grill would be uneconomic, and so is the established practice of keeping convalescent patients in acute hospital beds. While a low average figure is not in itself a goal to be aimed at, it emphasises certain facts often overlooked. The patient who stays in hospital a day longer than necessary uses the hospital as a hotel. Expensive equipment should be used as far as possible solely for the purpose for which it was designed: industry achieves efficiency in this way. A surgical theatre suite makes its contribution to each patient in a relatively short time varying from minutes to hours. Far too often, however, the work which could be carried out in theatre and other expensive facilities was limited because beds were fully occupied".

In summary, while clinicians have written of the sound clinical sense of early discharge for certain conditions the running is now taken up by doctors arguing the case from the social and economic point of view. Emphasis is made on the need to conserve scarce hospital resources and this argument is complemented by the fact that most patients would not wish to be in hospital anyway, assuming that there was no clinical contraindication.

The Movement Towards Planned Short Stay Systems of Care

With increasing pressure on hospital resources and with increasing acceptance by clinicians and patients of early discharge from hospital, planned short stay systems of care have been introduced in many hospitals in this country and abroad.* The length of stay in these systems varied widely, from five days at one end of the scale to one day or less (ie day bed care) at the other.

Two systems were discussed in the literature. The first involved the use of facilities which were already employed for some other patient care function. Thus in a day system of care patients might be operated upon in an in-patient theatre and recover on a temporarily vacated in-patient bed. This type of planned short stay care was the first to be introduced and the reason invariably given was the acute economic one of too many patients waiting for too few beds.

The second system was the purpose designed unit in which facilities were created and used solely for short stay care. Many of these units were multi-specialty (and the economic reason for their opening may not be quite so apparent since the demand made on a number of specialties inevitably tends to be variable). Purpose designed units tended to be introduced after it was shown that short stay systems of the first type were successful.

There is more literature on the first system and this may be related to the necessity at that stage to prove the value of planned short stay.

*The term planned refers to the duration of stay in hospital as well as to the entry date both of which are planned before entry to hospital.

Peatfield (1969) of Bedford adopted a system of admission the evening before the day of operation and discharge on the second post-operative day, the operations being for hernia, varicose veins and haemorrhoids. His reason for introducing a system of planned short stay was the length of the waiting list for operations for these conditions.

Aldridge (1965) of Birmingham found that his waiting list for hernia cases was beginning to grow and began a scheme for the early discharge of patients treated by herniorrhaphy. Initially he transferred them to a convalescence hospital some 14 miles from the main hospital but with the waiting list still growing began to discharge many patients directly home on the third day following operation.

Aldridge found that patients were very alive to the implications of such a scheme in terms of cost to the Health Service and the maximum use of beds, but did not think that they appreciated the extra load thrown on medical staff. He considered that the staffs were bolstering inadequate material facilities by their own efforts and that schemes of this kind, while of value in containing a problem within certain limits, were in fact expedients and should not be regarded necessarily as desirable in themselves. Planning of hospital buildings to work along these lines would only serve to perpetuate existing shortages and would continue to conceal the lack of capital resources in the service.

Several surgeons have argued for the discharge home to take place on the day of operation for certain procedures.

In general surgery, Farquharson (1955) advocated day bed care for inguinal herniorrhaphy. His waiting list was so long that the patient with inguinal hernia was likely to remain indefinitely on the waiting list for operation since precedence had to be given to those patients whose diseases were progressive or endangering life. He argued that many of these hernia patients - usually young men with families to support, working under difficulties or perhaps prevented by their disability from working at all - were socially and economically more urgent cases than the old people with their advanced carcinomata, which, so often when the final count was made, were unable to be cured.

He calculated that if the 485 patients he treated between 1950 to 1955 on an out-patient basis had been admitted to hospital for the customary 10 days they would have filled a 28 bedded ward continuously for nearly 6 months. The total period in hospital would have amounted to 4,850 bed days which would have cost £7,500 at that time.

He had not assessed long-term results of out-patient herniorrhaphy but he considered that if one accepted the view that herniae which are going to recur usually do so within a year then his results were as good as many of those claimed for cases treated by orthodox methods.

Stephens and Dudley (1961) justified out-patient operations for hernia or varicose veins as follows:-
They had a large number of patients on the waiting list for these operations. Patients had to wait eighteen months to two years for

operation. Following introduction of out-patient surgery the waiting time fell to three months for minor in-patient surgery.

Agreeing with the positive advantages given by Farquharson (1955) they encountered others which were mainly social. Most patients were relieved to learn that their condition was sufficiently minor to warrant their return home and pleased to find they could sleep in their own beds and convalesce in their own environment. Women in particular were glad to return home where they could at least exercise control over the family. They also did not feel impelled to buy new night clothes and toilet accessories before going into hospital, but were prepared to economise if treated as out-patients. Stephens and Dudley did not find that the contrary view, that women would have preferred a short holiday from their family while undergoing an operation applied in their experience. They did find that reduction in the waiting list had a very favourable effect on the morale of the unit and that the scheme helped to integrate general practitioners into the hospital service by allowing them to share in the post-operative care of their patients.

Stephens and Dudley finally suggested that there were probably ultimate reductions in the cost of treatment of individual patients although they had no data for support of their view. They did note that a great deal of time and energy must be expended if a good service is to be provided.

They had no long term surgical results available, but were confident that those for varicose vein operations would be comparable to those for in-patient treatment. They were less certain about the outlook

for hernia recurrence, but none had occurred at the time of publication. At a meeting on Day Surgery at Oxford (1966) Dudley found a hernia recurrence rate of 2% over the 6 years the system had been introduced.

Williams (1969) advanced similar economic arguments stating that there was usually little justification for admitting patients to hospital "for investigation". They may wait for days (with free board and lodging) while the results of tests were evaluated or second opinions sought. He considered that the efficient use of good clinic facilities should allow almost all patients to be fully investigated as out-patients, except those who required strict metabolic balance.

Williams operated on a wide variety of conditions involving minor or moderately severe surgery. All of his patients said later that they were glad they had the operation as an out-patient, but he does not describe the technique used in obtaining their opinion.

Two of the general practitioners involved in Williams' scheme, Dean and Wilkinson (1969), considered there were two apparent disadvantages. Firstly, the patient would travel by ambulance within a few hours of having had an operation and secondly he would be at home without the constant presence of professional medical aid. They found that these objections were more theoretical than real. Adequate sedation ensured that all patients had a relatively comfortable ride home. (In his series, Farquharson noted that he was not altogether successful in ensuring comfort). When at home the patient was seen

by the family doctor within a short time and they considered that constant supervision at this time would be purely prophylactic.

They emphasised the value of the shorter waiting time for operation and the fact that the operation date could be fixed at the first out-patient consultation. The patient could be nursed in familiar surroundings by people he knew. They believed that hospitals held a fear for some persons and that early return to familiar surroundings was preferable. In practice they found that the extra work was minimal - about the same amount of visiting as say, a case of measles and believed that the system was good for family doctors in widening their horizons, however slightly.

Commenting on Dean's and Wilkinson's views, Titcombe and Dootson (1969) found those on the role of the family doctor to be 'humiliating'. He would be doing work which, in hospital, would be delegated to the most junior house-surgeon and nursing staff. Titcombe and Dootson thought that many surgical procedures were within the capabilities of general practitioners given the opportunity of training under supervision. Stephens and Dudley, it should be noted, went so far as to send members of their professional surgical team in to supervise care at home following herniorrhaphy in order to be sure that a high standard of care was maintained.

In gynaecology, day care has been practised for many years. In the United States the system was in operation as early as 1925 when Kelly reported his work in diagnostic curettage. The controversy

thereafter centred not so much on whether the operation should be carried out on an out-patient or an in-patient basis but whether it should be carried out in the doctor's "office" or in the hospital out-patient department. His reasons for "office" curettage were basically economic - to save the patient much time and enable the surgeon to reach a prompt decision.

Israel and Mazer (1938) pointed out that in the United States many women were unwilling or financially unable to enter a hospital for diagnostic curettage for metrorrhagia unless the imminent danger of overlooking a carcinoma was broached.

A scarcity of hospital beds and personnel stimulated the expansion of the gynaecology out-patient service begun in the late 1930's at the Johns Hopkins Hospital. [Vermeeren: Chamberlain and Telinde (1957).] Thereafter the demand and popularity had continued both with staff and patients. For patients it saved time and money and for the hospital, bed space, nursing time and record keeping.

It was also pointed out however, that it had a psychological advantage in that the patient was willing to accept the procedure as a truly minor one and return to normal activity the following day. This experience is similar to Farquharson's (1955) who also found the patients were delighted and surprised when told they would be able to return home immediately after their hernia repair.

Referring to the United States, Mengert and Slate (1960) stated that diagnostic D & C for detection of cancer of corporeal endometrium represented the most expensive test in the entire field of medicine,

the cost varying to the private patient from $100 to $250.

In this country, the primary need for the system was also an economic one, but social benefits were also noted. Mills (1959) regarded the performing of D & C which he instituted in a regional hospital as an expedient to save hospital beds, but found it proved remarkably popular with many of the patients. They rarely complained of feeling unwell and many were delighted at being able to sleep in their own beds.

Craig (1970) made some attempt to compare the economic advantages of day care with in-patient care. He examined the amount of work done during 1968 in two units each of 20 beds, one using day beds for nearly all minor cases and the other admitting patients in the traditional way. He concluded that the use of day beds allowed a considerably greater number of patients to be treated and ensured a high bed occupancy.

While it might be agreed that the unit which does not practise day care is likely to treat a smaller number of patients than a unit which does, it should be emphasised that Craig's study is in no sense a controlled trial. He, in fact, selects patients for day treatment very carefully and the "straightforward" cases would tend to be diverted towards the unit practising day care either by the GP or the hospital clinician.

Craig estimated that at least half of the 3,317 patients waiting for gynaecological surgical procedures at Leeds Regional Hospital Board's hospitals and United Leeds Hospitals could be treated as day cases if the necessary facilities were available and the surgeons

concerned were satisfied that the procedure was safe. He does not say how long these patients were on the waiting list. The cost of giving post-operative care at home is also not evaluated but there is no doubt that his system would save on bed usage.

In obstetrics, Theobald (1959) adopted a scheme of planned early discharge within 48 hours of delivery. The motivating force here was a desire to increase the number of antenatal beds. In Theobald's experience improved antenatal care resulted and he thought that early discharge prevented the baby from becoming a culture medium for the hospital staphylococcus.

The development of short stay paediatric surgery is now examined. As early as 1909 Nicoll and Campbell, working in Glasgow, and Fullerton in 1913, in Belfast, reported on their work in out-patient surgery on children. The operations carried out, which will be described later, come into the major surgery category. Fullerton's reason for adopting the system was a very definite socio-economic one. "In this way numbers of children are relieved who could not otherwise have been properly treated on account of shortness of beds."

Approximately half a century later, in London, Lawrie (1964) started operating on infants and children as "day cases". The original reason was that children kept in hospital often acquired infections during their post-operative stay. To support his view, Lawrie quoted Watkins and Lewis-Faning (1944) who found that in good children's hospitals 14% of the children were in hospital for infections acquired after admission.

However, Lawrie also found that parents and children preferred the new system and there was much less disturbance in the family both at the time and afterwards. He pointed out that many young children are very unhappy in hospital, and on return home are disturbed - and disturbing - for some days or weeks.

In this instance, therefore, day bed care was adopted not for economic reasons but for clinical and social reasons, as "a considered attempt to do what was best for the patient and his family". Lawrie discussed as an alternative to day care the admission of mother as well as the child, but thought that this tended to disrupt the family.

He considered that all his patients fared at least as well as they would have if they had been kept in hospital and found the system gave a 'delightful flexibility whereby any child could be dealt with at a moment's notice without waiting for a bed', and finally, that 'increased happiness has resulted for the patient and their parents'.

In summary, the motivation for the introduction of planned short stay systems of care was usually socio-economic in nature viz. an unacceptably long waiting time for hospital treatment. Since the treatment was usually confined to a particular procedure or group of procedures then the short stay system which was introduced tended to be for a fairly narrow group within a single specialty. The operations were usually of the non-urgent, moderately severe type, requiring general anaesthesia, full operating theatre facilities, and some rest facilities. Operations of this type can acquire no priority amongst those waiting for hospital treatment.

The systems introduced were makeshift in character, tending to make use of existing facilities eg use made of an in-patient operating theatre and in-patient beds of patients who were up and about. Such a system may be regarded as the superimposing of a an additional hospital care function upon an existing function.

Purpose Designed Short Stay Units including Day Bed Units

The background to the introduction of units which were purpose designed for short stay care is now examined.

The short stay or 5 day ward at Leicester Royal Infirmary has been described by Follis (1969) and Hutchinson and Kane (1967), and referred to by Martin and Wild (1967). This was established as a means to offset the closure of beds because of the introduction of the 44 hour week for nurses. The waiting list for admission to acute beds in the area was also one of the largest in the country.

Seven specialties participated in the new system - general medicine, general surgery, urology, thoracic surgery, orthopaedic, ENT and ophthalmology and a wide range of procedures was carried out including hernia, varicose vein, circumcisions, appendicectomies, hydrocoele, haemorrhoids, tonsils, adenoids and dental operations.

There is no doubt according to Follis that the backlog of patients waiting for this form of treatment was reduced. However, complete re-allocation of beds between hospitals in the area was now eventually envisaged and the five day ward would almost certainly disappear. Difficulties which originally led to the opening of the unit would be solved in some degree by the reorganisation. Follis thought the amount of early discharge would possibly diminish and it is important to note that with the solution of some of the acute problems doubt began to be expressed over the practice of sending patients home early after moderately severe surgery.

Two purpose built day bed units in this country are described in the literature. The first, by Hall (1969) is situated in

Walton Hospital, Liverpool and contains twin theatres and a 20 bed day ward and was opened in 1967. Hall considered the advantages of the new unit, one being the increased availability of in-patient beds for major surgery, but he also emphasised the social advantages -

i. no visiting required of relatives
ii. the saving of worry of a long hospital stay
iii. the reduced absence of the patient from work
iv. the availability of treatment for mothers who normally refuse operation because of home commitments.

While it may be accepted that less visiting is required for a day patient than for a longer stay in-patient, Hall produced no evidence to support the other factors mentioned.

In 1966 a new day bed unit was opened in Shotley Bridge General Hospital, County Durham (Lawther 1967). Accommodation for 12 adults and 4 children is provided with a theatre suite and ancillary ward accommodation. Lawther's study is purely descriptive of facilities and there is no analysis of the effect of the unit on the work of the hospital or of the type of case carried out.

A study is given by Brown (1964) of the newly opened unit at Sheffield Royal Infirmary. This is again descriptive and gives no indication of the reasons for its introduction.

In the United States, Crosby (1967) and Levy and Coakley (1968) reported on "In and Out Surgery" facilities introduced at the George Washington University Hospital in 1966. A wide variety of minor procedures in gynaecology, general surgery and urology were carried out. They considered the system to be convenient and efficient, that it disturbed the patient's routine less than

hospitalisation and that recovery was more rapid. The cost to the patient was less than for in-patient care, the saving being in room and board. The operating room charges and anaesthesia fees were not reduced.

Crosby pointed to a certain lack of response by clinicians in using the new facilities in spite of attempts to get as many patients as possible under "In and Out Service" care. For example, it was recommended that D & C's be done at "In and Out" whenever possible and encouragement was also given to establish categories of procedures to be done routinely on an in-and-out basis. Nevertheless there was already pressure by some clinicians for the introduction of over-night patients there and it was concluded that the hospital would have to adjust the service to meet the needs of doctors and patients.

Cohen and Dillon (1966) discussed the benefits following the opening in 1962 of the Out-patient Surgical Unit at the University of California Los Angeles Centre for Health Services (UCLA), finding in the main that the economic advantages were the most important.

In Vancouver, Canada, a day bed unit has been opened specifically for paediatric surgery and for specific economic reasons (Davenport, Shah and Robinson, 1971). The increasing cost of health services prompted the federal government in Canada to inquire into methods of restraining the rate of increase. Following initial studies which showed that one quarter of all admissions to children's units in Vancouver could be cared for in ambulatory surgical units and following studies into medical complications and parental attitudes, a 10 bed day care surgical unit was opened by the Children's Unit at Vancouver. As a result, waiting lists for elective surgery have

dropped and acute-care beds have been freed for other patients. It was thought this would reduce the urgency of provision of acute-care beds for children.

In general, where no acute waiting list problem existed then the motivation towards early discharge following moderately severe surgery was less strong. Thus the short stay unit at Leicester tended to carry out moderately severe surgery, but when the acute waiting problem was relieved, doubt over the propriety of sending patients home early after this type of surgery began to be expressed by the clinicians involved and the possibility of curtailing the use of short stay care was proposed.

Where a number of specialties are associated in a short stay system of care, as in the newer purpose designed day bed unit it is unlikely that an acute waiting list problem would be common to all the specialties. Thus the demand made on the unit is less and the procedures carried out in such a unit are therefore often of the less severe variety. In writing of the usefulness of purpose designed units the social advantages and advantages of improved quality of care tend to be emphasised as in Hall's description of the Liverpool unit.

The purpose designed systems may be regarded as new functions of care working alongside and sometimes vying with existing functions.

Recently Calnan and Martin (1971) have described the advantage of a separate day unit for minor plastic surgery while Berrill (1972) has described the work of a day unit dealing with general surgical, ENT, urology, orthopaedic, dental and plastic cases.

CHAPTER I.2

CURRENT SHORT STAY PROCEDURES: SELECTION OF PATIENTS AND STANDARDS OF CARE

It has been suggested earlier that the stimulus to introduce an alternative form of hospital care to the existing in-patient system was often brought about by the needs of one specific group of patients, those requiring moderately severe, non-urgent surgery. This group of patients traditionally required an operating theatre, general anaesthetic, a hospital bed and post-operative nursing care.

Characteristic of this group of operations were the hernia repair operations, inguinal, femoral and umbilical. The other frequently performed operation was ligation of varicose veins with or without stripping of veins. Several surgeons have reported on systems of day treatment for these conditions.

In 1955 Farquharson reported on 485 cases of inguinal herniorrhaphy performed as outpatient procedures while Stephens and Dudley (1961) and Caridis and Matheson (1964) of Aberdeen followed Farquharson's lead. Williams (1969), another advocate of day care for hernia repair, extended his range of operations to include segmental excision of breast, fissurotomy or polypectomy of anus and excision of large lipomata, node biopsy etc. Williams' operation list aroused controversy, Park (1969) suggesting that quantity of work was being placed before quality and Lawrie (1969) vehemently taking the opposite view. Others, feeling they could not go as far as day care for surgery of the type advocated by Farquharson, settled for a period of 48 hours post-operative care in hospital [Aldridge (1965) Doran (1969) and Peatfield (1969)].

Nevertheless, few of the exponents of day care for this class of surgery described many complications requiring readmission to hospital in their series. Farquharson noted 11 out of 485 treated, mainly due to oozing from the wound or haematoma formation. Neither Stephen and Dudley or Caridis and Matheson reported any complications.

Operations in Children

Nicoll (1909) presented an account of 2,392 operations he had done in the out-patient department of the Royal Glasgow Hospital for Sick Children in the period 1899-1908. These included 610 for talipes, 406 for hare-lip and cleft palate, 36 for spina bifida, 165 for mastoid disease, and, between 1903-1908, 220 for hernia. He did many operations for tuberculous glands, bones and joints. The results were said to be as good as those in children treated as in-patients.

Stiles (1909) of Edinburgh, in the discussion which followed, was opposed to operating for hernia in the out-patient department but Campbell (1909) said it was his own practice in the Belfast Hospital for Sick Children.

Fullerton (1909), while giving a warning about possible medico-legal complications (page 14), later became so convinced by Nicoll's results that he wrote in the BMJ in 1913 that he now performed hernia and hydrocele operations in the out-patient department in addition to operating on hare-lip, some cases of cleft palate, knock-knee and bow leg in children about 4-5 years of age, enlarged tonsils, adenoids, naevi, tuberculous joints in the upper extremity, glands, tumours and cysts in the neck. One crowning achievement was the removal in the out-patient theatre of an occipital meningocele with an entirely successful result.

For children the system of day care surgery is accepted. Today many surgeons carry out moderately severe procedures in children as day cases. Thus Lawrie (1964) carries out the following operation list on children:

inguinal hernia

circumcision

hernia - umbilical, paraumbilical, linea alba

hydrocoele

orchidopexy

excision of cysts etc

endoscopic procedures

biopsies

Ramstedt's Operation

Gynaecology

In gynaecology, it was early accepted that the diagnostic D and C was suitable for day care, but in the United States the question was argued that hospital facilities were not required and that the procedure could be carried out in the doctor's office. The important points in "office" curettage were that it was carried out without general anaesthesia and in a place perhaps lacking in the resuscitation facilities normally available in a hospital. This question is directly applicable to the organisation of care in this country since it highlights the question as to what facilities really are required to carry out day surgery, eg could it be conducted in a health centre situated at some distance from a hospital?

In gynaecology advocates of out-patient diagnostic curettage were Strittmatter (1925) in the United States and in Germany, Mikulicz and Radecki (1926) while in this country, Wagman and Bamford (1971) and Littlepage, Daniel, Ahmad and Turnbull (1969) have published favourable results.

Treatment of Abortion

In the United States, the treatment of incomplete abortion on an out-patient basis has become established. Braungardt, Kaufman and Franklin (1963) describe how they were literally forced into treating the incomplete abortion as an out-patient case because of the increasing number of abortions and relative shortage of beds.

Decenzo and Cavanagh (1967) reported that at the Jackson Memorial Hospital the percentage of abortions treated by the Obstetrics and Gynaecology Service of the University of Miami constituted 25-30% of all admissions and lead to the management of incomplete abortion there on an out-patient basis.

In this country Craig (1970) thought it possible that incomplete abortion and legal abortion could be treated in a similar manner, but there would require to be complete day bed accommodation, theatre accommodation, equipment and staff to enable the operation to be performed properly and with safety.

These procedures typified, therefore, the planned short stay systems of care reported in the literature; in general surgery, the moderately severe operations of hernia repair and varicose vein ligation and stripping; in gynaecology, the diagnostic curettage and related

procedures; in paediatrics, a wide range of procedures ranging from the major operations for talipes, hare-lip and cleft palate reported early in the century by Nicoll, Campbell and Fullerton to the moderately severe procedures of hernia repair and Ramstedt's Operation of more recent times.

How Were Patients Selected and What Standards of Care Were Adopted? The factors discussed are age; domestic conditions; the journey between home and hospital; general health and the pre-operative assessment; post-operative care.

Age: Age is discussed in relation to selection of cases by most of the authorities reporting on day hernia repairs.

Farquharson operated on patients ranging from 12-83 years. He considered that advanced age itself was no bar to the out-patient operation; indeed he thought it a strong indication since old people are especially subject to the complications induced by confinement to bed, and are more upset by departures from their normal routine. He writes that the old gentleman who is returned to his own bed after operation, and who can walk to his own lavatory, seldom develops retention of urine. None of his patients suffered from this complaint although 16 were over 70 and 3 over 80 years of age. It should be noted, however, that his cases were all operated upon under local anaesthesia.

Stephens and Dudley had an age range of 14-69 years and a mean of 40 years in their series while an upper age limit of 70 years was imposed. Caridis and Matheson's patients were all under 60 years of

age and Peatfield and Aldridge **both excluded patients for** hernia repair under 17 years or over 70 years from their short stay system although patients were in hospital 48 hours. The fear of complications in the older age groups is perhaps reflected in their practice of having an ECG performed on every patient over the age of 50 years.

Williams paid particular attention to age in operating on a hernia case as an out-patient, restricting the age after initial operation to 45 years, while Ruckley et al (1971), who carried out hernia repair and varicose vein ligation and stripping, preferred patients below the age of 60 because of the greater liability above that age to post-operative chest infection, urinary difficulties, and cardio-vascular complications. Age was taken into account in selecting patients for hernia repair at the day bed unit in Walton Hospital, Liverpool. (Hall 1969).

Thus the majority of exponents of out-patient hernia repair have, in effect, an upper age limit in mind during the selection of cases.

There was no clear indication as to the lower age limit for day surgery. Davenport, Shah and Robinson (1971) stated that in their children's day bed unit, surgeons were not in agreement concerning the use of day care for neonates and infants under 6 months of age who required elective surgery, but that elsewhere some considered there are advantages to this form of management for this age group.

Thus Nicoll (1909) had found out-patient surgery of the major variety more suitable for the youngest children. "I express an opinion which

I believe to be well founded when I say that in children under 2 years of age there are few operations indeed which cannot be as advantageously carried out in the out-patient department as in the wards. In the case, for instance, of a child of 18 months after herniotomy or abdominal section, the idea that in hospital he is left lying quietly on his back largely obtains. Further, if he will not lie quietly he may be fixed on a splint. My experience has been that more often than not he is 'all over the bed' directly the nurse's back has been turned on him and that, if 'splinted' his crying and struggling put fresh strain on the sutures."

Nicoll noted that the older child is more difficult in one instance to manage at home - "While cleft palate operations in suckling infants do well as out-patients, the child of 3 or 4 must go into the wards, where care can be taken to prevent his putting hard edibles into his mouth." Thus Nicoll's cases were largely infants and young children.

Domestic assessment

On the whole, domestic assessment was not emphasised by most writers although some evaluation probably took place during the process of patient selection. The assessment usually took the form of questioning by the consultant at out-patient consultation. (Doran 1969).

Farquharson wrote to the family doctor seeking his co-operation, but only after he had selected the patient for day care at the out-patient consultation, excluding at this stage patients living in lodgings and those living with their family in a single room.

In Stephens and Dudley's practice a social assessment was not originally made, but experience showed this to be essential. They found out that patients were initially sent home to unsatisfactory conditions. The occurrence in their series of one patient, considered especially suitable for out-patient treatment, who refused the treatment and later was found to have unusually difficult circumstances of which the hospital team was unaware, illustrated that ascertainment of home conditions in the out-patient department was not always satisfactory.

In offering day surgery for children Lawrie sent a letter to the doctor informing him of the diagnosis and proposed plan of treatment. It told him in some detail that the operation would be done as a day case and that the child would be returning home on the day of operation. However the family doctor was not asked for his opinion as to the suitability of the course of action proposed. Presumably there was less risk of giving unsatisfactory care here since the surgeon at the consultation would have ample opportunity to assess the person who would be nursing the patient in the post-operative period - the mother.

Davenport, Shah and Robinson noted that evaluation of the suitability of the parents to care for the child at home was carried out by the surgeon in his office during consultation but also as late as the day of operation by the hospital staff.

In the Glasgow of 1909 in which Nicoll carried out his pioneer work in the out-patient surgery of children the home conditions must have been often unsatisfactory. In the discussion which followed

Nicoll's paper, Edington of Glasgow (1909), in detailing the after-treatment of operated cases of hernia in infants, noted that from experience amongst the poor he was certain the child would often have to share the family bed with the parents and other children, even when suffering from infectious diseases. However, the essential element for children was considered to be the care given by a good mother. Nicoll commented that continuous quiet rest on the back on the part of a young child in pain "was a pretty idea rarely obtainable", and not specially necessary after such operations. He believed that young children, with their wounds closed by collodion or rubber plaster were easily carried home in their mother's arms, and rested there more quietly, on the whole, than anywhere else. With a mother of average intelligence, assisted by advice from the hospital sister, the child fared better than in hospital.

With the exception of Craig (1970) and Mills (1959) few of the exponents of out-patient operative gynaecology discussed the need for domestic assessment. There is little indication in the American literature either in general surgery or gynaecology as to how home evaluation was carried out, but it seems likely that this was usually conducted at the out-patient consultation. In the system described by Cohen and Dillon the patient was not sent home unless accompanied by a friend or relative so that clearly some investigation into home circumstances had been made.

Thornton (1969) as an anaesthetist did not enter into any discussion about home conditions - assuming that this side would have been discussed between the GP, District Nurse and Surgeon. In his hospital

this may have worked satisfactorily but the suitability of home conditions and the adequacy of the person supervising the early post-operative period must surely be of equal importance to the anaesthetist and the surgeon.

Where there is communication prior to surgery between surgeon and GP, as to the suitability of the patient for day care, then clearly some progress has taken place towards a reliable evaluation of the home, since the GP should have reasonable knowledge of the home circumstances of his patients.

In the experience of Dean and Wilkinson (1969) knowledge which the GP possessed of the patient was most valuable in deciding suitability. When referring the patient the general practitioner intimated whether he considered the patient suitable ~~the patient suitable (after discussion with him)~~. The general practitioner considered not just medical fitness, but mental attitude to illness and pain as well as social circumstances. For such a scheme to succeed there must obviously be close co-operation between the general practitioner and surgeon - the former must become an integral part of the organisation. This close co-operation might be difficult to achieve where a large number of GPs were involved as Stephens and Dudley found in Aberdeen.

The usefulness of pre-operative home assessment by the district nurse was emphasised by Ruckley et al (1971) pointing out that neither patient, surgeon nor GP might be in a position to judge the suitability of the home background. As examples, he described one patient who had no bed on which to rest by day because it was occupied by a son working

night shifts. Another patient after having a hernia repair walked nonchalantly up the stairs when the ambulance men found difficulty in negotiating them with the stretcher.

However, Ruckley et al (1971) went a stage further in building up a domiciliary care organisation which, in addition to the district nursing service, included the general practitioners. Eventually 28 general practitioners took part in his scheme.

Hockey (1970) has shown that knowledge of home conditions can be very useful in deciding when the patient can be safely discharged home. Her study was concerned with the effect of appointing to the hospital surgical team a person who knew the patient's home conditions (a senior district nursing sister) and who was trained in the treatment and after care favoured by the surgeon. Continuity of care by the district nursing service was shown to be a workable and desirable proposition.

District nurses or health visitors appeared to be rarely used in assessing home conditions. Exceptions were found in the practice of Peatfield and of Aldridge. They each adopted a system by which a Senior Nursing Officer in the area was asked to send a district nurse to visit the patient's home. This assessment was based on: whether bathroom, lavatory and kitchen were accessible; the number and age of any children living at home; any relatives at home needing care and attention; the general state of hygiene in the home.

There was therefore a general agreement that assessment of the domestic situation is desirable for short stay surgery of this type.

However, it is doubtful whether full use has been made of the domiciliary health services by all who practise day care of this type.

The Journey between Home and Hospital

In day surgery for hernia and varicose veins Farquharson would not operate on any patient living more than five miles from the hospital. This was probably related to his aim to get the patient back home into his own bed before the local anaesthetic lost its effect.

Stephens and Dudley (1961) in the initial stages arbitrarily imposed a limit of 10 miles. However this was ultimately extended and one patient successfully treated lived 45 miles away. Eventually, however, they did begin to consider the duration of time spent by patients on the journey home. Ruckley confined out-patient surgery for hernia and varicose veins to those living within the city boundary (Edinburgh). In surgery with a 48 hour stay Doran has accepted patients up to 20 miles away if the patient was intelligent and co-operative, the home conditions satisfactory and the general practitioner prepared to take a special interest.

Nixon (1967) has spoken of the difficulties in transporting patients in London. Because of these about one third of all children's day-surgery cases conducted at Great Ormond Street remained overnight. He was considering a midday operating session from say 10.30 am - 3.30 pm in order to overcome these difficulties.

It seemed that distance itself was probably not the only important factor considered but the time which transport took to reach home and

the method by which the patient travelled had some influence in the selection of patients.

In the instructions given to patients using the out-patient Surgical Unit of the UCLA hospital (Cohen & Dillon 1966) was included the following -

"Someone must accompany you home from the hospital. You will not be allowed to drive yourself home or go home by any public conveyance after any surgical procedure".

Thornton (1969) in discussing the principles of care for patients having short stay hernia repair pointed out that certain over-confident patients - despite previous instructions - will have driven themselves to hospital in their cars and will plead to be allowed to drive themselves home. This should not be allowed under any circumstances, in his opinion. He considered they must be accompanied by a responsible person and in private transport or ambulance.

Farquharson's (1955) herniorrhaphy patients were operated on using local anaesthesia and it had to be impressed upon the ambulance drivers, however, that although the patient may have walked into the ambulance they should as a rule be carried out, since by that time the effect of the local anaesthetic may have worn off.

Hall (1969) in discussing the care given to a typical patient having hernia repair as a day case, noted that the ambulance personnel were told of the recent operation and the care needed and instructed to carry the patient upstairs when he reached home and to leave him comfortable in bed.

Doran (1969) had a steady trickle of complaints from the patients about transport, usually because they had been driven home by a roundabout route, with several stops; during some of those stops the patients often had to wait quite a long time before the journey was resumed. Doran recorded that once the ambulance never came at all and the patients were left stranded. He described one episode where the ambulance stopped not by the patient's house, but at the end of the road, and he was told to walk the rest of the way, carrying his own suitcase.

The system of transporting patients was very different in 1913 when Fullerton wrote of his experience of out-patient surgery in children. So long as the child could be carried to hospital then the needs of the child were catered for satisfactorily. The distance involved in the City of Belfast at that time would probably not be great. Presumably the mother who would normally take the child to and from hospital would not have far to travel.

Dudley (1966) raised one other problem in the transport of patients home following treatment, that of keeping to a minimum the time spent by patients awaiting the transport. It was also found that the giving of four days notice for ambulance transport, which was originally requested, was necessary only for the longer journeys.

Pre-operative Clinical Assessment of Suitability for Short Stay Care

Role of the Anaesthetist

Various hospital personnel and methods were used in assessing whether patients are suitable for short stay care. A great deal obviously

depended on the resources available and the existing organisation. Several writers believed that the anaesthetist should be involved in the selection process. Stephens and Dudley working in close co-operation with their anaesthetist colleagues, Sutherland and Horsfall (1961) considered that pre-operative examination and assessment should be as complete as for the in-patient. This required an adequate out-patient clinic in which anaesthetist and surgeon could see the patient together, arrange investigations and advise the patient about the form his treatment was to take.

The importance of the role of the anaesthetists was further emphasised by Thornton (1969), pointing out that there was insufficient time in a busy clinic for a thorough medical examination at the first consultation although the patient could be referred at this time for chest X Ray, HB, urea, electrolytes urine analysis and weight. For Thornton the solution for a proper patient assessment lay in the setting up of an anaesthetic out-patient clinic to evaluate fitness for general or local anaesthesia, the examination being carried out 10-14 days before surgery was contemplated.

In some systems of care the anaesthetist apparently took little part in the initial selection for short stay care, the surgeon supervised this out-patient assessment himself. (Doran (1969).

More commonly the anaesthetist only became involved in assessing suitability immediately before operation and was therefore not involved in the consideration given to the suitability of home circumstances etc. Thus in the system of day care described by Cohen and Dillon the patient was examined by surgeon and

anaesthetist on arrival at the unit for operation. Patients or parents were questioned regarding recent intake of food or drink and then directions for prospective medication were given by the anaesthetist. In the system of Davenport, Shah and Robinson patients were admitted one to two hours preoperatively and examined by an anaesthetist to exclude upper respiratory or other infections. In addition, however, a Medical History Questionnaire had to be completed by the accompanying parent or guardian at this time so that the actual process of selection for short stay care was actually carried out right up to this point.

In the description of a typical hernia case treated at the day bed unit at Liverpool it was the house surgeon who carried out the physical examination prior to operation.

The Pre-operative Clinical Assessment

The factors which were believed important in carrying out the assessment are now considered.

Several, notably Stephens and Dudley, Williams, Davenport et al, emphasised the need for chest X-ray and a blood test in addition to full physical examination. However there were differences in the emphasis given to the various tests.

In the system of Stephens and Dudley each patient had a routine blood pressure and analysis of urine recorded. Blood studies, peak expiratory flow rates and electro-cardiography were done when indicated. A special anaesthetic out-patient form was used and incorporated in the patient's case records and the pre-medication,

operative details and post-operative sedation were later entered on its reverse side. Patients were rejected for out-patient surgery only after consideration of all the physical findings and a routine miniature X-ray film of the chest, supplemented, if necessary, by a full size plate. The decision was made by both surgeon and anaesthetist rather than by either alone.

Thornton's system emphasised the requirements of the anaesthetist - A routine medical examination was carried out with particular attention paid to blood pressure, cardio-vascular system and respiratory system. Potential difficulties with airway due to abnormalities of mouth or throat were sought. The state of the teeth were assessed. A check was made on any drug therapy - recent or current and if the patient was unsure, direct contact with the general practitioner was considered vital.

Thornton gives a list of points on which direct questions should be asked -

1. Previous illness, operations and anaesthetics
   diabetes : hormone substitution therapy
   Sickle cell anaemia in people from The West Indies, Africa and Mediterranean regions.
2. Cardiac disability - rheumatic heart disease, rheumatism or chorea
3. Drug Therapy
   a. steroids
   b. monoamine oxidase inhibitors
   c. oral contraceptives : Enavid - Norinyl
   d. antihypertensives
   e. anticoagulants
   f. sensitivity to drugs.

4. Symptoms referable to the respiratory system - chronic bronchitis with sputum and bronchial spasm: dyspnoea; cigarette smoking should be discouraged for 14 days before the anaesthetic is administered.

5. Cardio-vascular system : cardiac failure

The elderly sometimes have a gradual onset of heart failure of which they are not aware and put their increasing disability down to old age.

Thornton considered important the inclination of the patient to being sent home earlier than is customary. This point was discussed and difficulties cleared up at the out-patient clinic.

Although the capability of providing personnel and facilities to carry out tests and examinations must vary considerably between the different systems described it is to be expected that the teaching hospitals are more fortunate in this respect. However, even here there may have been strain on the resources. Stephens and Dudley commented on the great deal of time and energy which must be expended if a good service is to be provided. In order to explore the possibilities of this form of out-patient treatment a special team had to be created.

The majority of the writers emphasised the need for a good pre-operative health assessment for the type of surgery carried out, but it is clear that some degree of organisation and the devotion of resources were essential if the short stay systems described were not to become too burdensome for those staffing out-patient departments.

Post-operative Care

Although Farquharson was one of the most ardent supporters of day bed care he did not understate the problem of post-operative care. He himself went to considerable trouble to ensure the co-operation of the relatives and family doctor, writing to the family doctor asking him for his co-operation in the treatment by visiting the patient for the first 2 or 3 days after operation, at the same time promising to admit the patient to hospital immediately should any complications arise. At the time of his leaving hospital after operation the patient was given another letter to deliver to the family doctor as a reminder of his promise to co-operate by visiting the patient.

Stephens and Dudley ensured some certainty in post-operative supervision by arranging for the patient to be visited by a member of their team next day in addition to asking the general practitioner to visit. Sutures were removed and review took place one week after operation at the hospital.

In Doran's system where patients were in hospital 48 hours post-operatively prior to discharge, their post-operative supervision is relevant in that this was carried out entirely by nursing staff since there was no resident doctor at the hospital. A letter was posted to the GP on the evening before discharge. However he noted that some doctors always visited their patients as requested; others did not.

In Williams' system out-patient operations were carried out only in the morning and the patient sent home by ambulance or collected by a

relative or friend at midday. Each patient was given a letter and operation note for a relative to take round to the general practitioner's surgery. The patient was also given four 50 mg pethidine tablets to take home for analgesia. Williams considered the general practitioner must be willing to visit the patient at home on the evening of the operation and at least once more afterwards.

Dean and Wilkinson described the role of the domiciliary services in Williams' system in more detail. Usually both doctors and district nurse visited on the first two or three days after operation; the nurse then continued to visit daily. Usually the doctor visited once more when the nurse removed the sutures.

Peatfield and Aldridge both emphasised the use of district nurses in the post-operative phase. At the time of discharge the Senior Nursing Officer was informed by telephone and a district nurse thereafter visited regularly until the eighth day when she removed the stitches.

Follis (1969) in assessing the work of the 5 day unit at Leicester Royal Infirmary also emphasised the role of the district nurse. In addition to a letter to the general practitioner another was sent to the nurse. The district nurses liked this short stay system. It gave them variety in their work and they would have liked more such patients.

Donald, speaking at a meeting on out-patient surgery held in Edinburgh in 1964, warned that general practitioners varied in their

willingness to supervise patients at home after a short stay including even a minor operation in hospital. However, Ruckley et al may have gone some way to solving the difficulty by having general practitioners in the scheme who agreed to co-operate. Ruckley found that some general practitioners visited their patients daily until sutures were removed, others left most of the visits to the district nurse but most of the patients were satisfied with the care given at home.

In spite of the attention given to the organisation of post-operative care the response of the general practitioners giving supervision did vary.

Thornton (1969) stated the post-operative care requirements from the anaesthetist's point of view: blood pressure should be checked before departure from hospital and a check made on dressings for signs of haemorrhage. Suitable post-operative sedative by mouth and preferably an evening dose of analgesia should be given by injection by the general practitioner. He pointed to one after-effect which was not being recognised - that of hypoglycaemia due to starvation and fatigue following on from nervous excitement. Symptoms of nausea, pallor and sweating on the journey home may persist through the night.

The post-operative care of children was discussed by Lawrie (1964). He saw his patients with their parents in the out-patient department on the fifth day and the skin suture was removed unless the infant or child had already done this. Lawrie did not mention any other post treatment measures beyond "a mother's loving care".

Nicoll, operating on children in 1909, had his patient visited at home by the hospital sisters and brought back to have the dressing removed at the end of a week or ten days. Nicoll, of course, operated in the days before the district nurse service was organised.

In the system of paediatric surgery at the Day Care Surgical Unit, Vancouver, described by Davenport, Shah and Robinson (1971) each patient was examined by a staff anaesthetist before discharge, and the nurse made sure the family had all the instructions necessary for the care of their child. On arrival home parents were encouraged to call the hospital for further help if unable to contact their own doctor or surgeon. Before leaving the hospital the family were told to expect a 'phone call from the nurse on the following day to enquire about the patient's condition. The domiciliary care here does seem rather remote.

Finally, the post-operative care given for a typical hernia case in a day bed unit - that at Walton Hospital, Liverpool was described by Hall. Pethilorfan was injected as required and Depronal SA 150 mg (8 capsules) prescribed to take home for the pain. The pre-discharge examination was conducted by the consultant surgeon. A proforma for the district nurse was given to the patient containing personal details of the patient; the GP's name and address; consultant surgeon's name; hospital telephone number; description of operation; sedation given, the time, dosage and route; details of sedation handed to patient for administration at home; whether the patient had micturated before leaving hospital; instructions re breathing and coughing exercises and early ambulation.

The district nurse then took over supervising the taking of the capsules starting at 10 pm on the day of operation. An early morning report was made by the district nurse to the day ward sister. The district nurse continued to make daily visits and on the 8th post-operative day the district nursing sister removed the sutures. The patient was examined by the consultant at the hospital five weeks after the operation.

It is clear from the literature described that these surgeons, in carrying out moderately severe surgery, generally took age, domestic conditions, transport and general health into consideration, and that they frequently relied on the general practitioner and/or district nurse for the post-operative care. The various factors were not equally emphasised, however, and there was frequent disagreement as to their importance.

How valid are these factors when applied to the current practice of day bed units? Are new standards required? Attempts to answer these questions were made in studies, described in Part II, based mainly on the organisation and work of the Day Bed Unit opened in February 1967 at Victoria Hospital, Kirkcaldy.

PART TWO THE WORK OF A SCOTTISH DAY BED UNIT

CHAPTER II.1

SCOPE AND METHODS OF PRESENT STUDIES

The objectives of the present studies were to identify and describe the problems which existed for patients and for staff in the operation of a day bed unit.

It could not be automatically assumed that any particular day bed unit could be representative of all such units. If, however, it could be shown that the work of the unit studied - in Kirkcaldy - was similar to that of other units, then the types of problems encountered in this unit might suggest appropriate standards of care and facilities relevant to future developments elsewhere.

A general description of the location, facilities and organization of the Kirkcaldy day bed unit, is followed by a description of the patients and their problems. The analysis was based on a special DBU Patient Record Sheet, on a follow-up survey of patients and on routine unit records.

An examination was carried out of the problems of organisation. The difficulties encountered by the staff were studied by less formal methods: discussion with staff and observation of the work of the unit and its relationship to other departments in the hospital. The use of facilities and services was studied using information collected on the DBU Patient Record and from routine unit records.

The effect of the unit on the pattern of hospital service was analysed from a study of clinical records while the measurements of quality of care, complications of treatment and alterations in the waiting time for admission to the unit were carried out using the hospital record of admission to in-patient units and the DBU Patient Record Form.

The methods used are now discussed in more detail.

The Main Day Bed Unit Survey - The Day Bed Unit Patient Record Sheet

The data available on the work of the day bed unit at Kirkcaldy were found to be limited in extent. The Scottish Hospital In-patient Record (SMRI) provided no information since this has not been extended in any hospital to the collection of data on day bed unit patients. The sources available consisted of:

1. a unit admission book in which were recorded patient's name, address, age, specialty and treatment carried out (completed by the nurse/receptionist)
2. a book in which bacteriological, pathological and bio-chemical tests were recorded by nursing staff.

It was necessary to design an individual patient record for each admission to the unit - the DBU Patient Record Sheet (see Appendix I). Provision was made for both written and coded information which was demographic, social, clinical and related to the organisation of care.

The sources were the patient, the clinical case record and the medical/nursing staff. The type of information collected had to be limited

to that which could be collected easily and recorded by the unit nurse/receptionist, bearing in mind that she had other duties to perform. These included the receiving of patients on arrival and the looking after their needs in the post-treatment phase while they waited for transport home.

The data were checked, omissions and errors corrected wherever possible from clinical case records and punched on 80 column punch cards by the South-Eastern Regional Hospital Board Data Processing and Computer Department. The data were then transferred to magnetic tape and tabulations produced by computer by the Department of Social Medicine, University of Edinburgh.

Information was collected on the DBU Patient Record Sheet on all admissions during the year ending 31 May 1969, a total of 3,261.

Procedures Performed in Other Day Bed Units

Information concerning the procedures carried out in other day bed units was collected during visits which were made to the Day Bed Unit, Stoke-on-Trent General Hospital and to the Day Bed Unit, Shotley Bridge General Hospital, Co Durham. Information on the work carried out at the In and Out Department, George Washington University Hospital, Washington DC, United States was provided by Dr Marie Louise Levy in a personal communication. Dr Cohen sent details of the procedures undertaken by the Out-patient Surgical Service at the University of California, Los Angeles (UCLA) Centre for the Health Services.

The work of other day bed units to be described was derived from the published literature.

Information on Laboratory Tests

After the introduction of the DBU Patient Record Sheet it became clear that not all the bacteriology, pathology or biochemistry tests carried out were being recorded on the Record Sheet, since it was difficult for the nurse/receptionist to know of all tests carried out. (The request for the test was not always recorded in the clinical case records at this stage). However, sufficient information to analyse the use made of these services was obtained from the laboratory test record book described previously.

Patient Follow-up Studies

Follow-up studies were carried out on patients treated in the Kirkcaldy Unit and day bed patients treated in the Gynaecology Department of the Royal Infirmary of Edinburgh. These are described respectively as the Kirkcaldy Day Bed Unit Follow-up Survey (or KDBU Follow-up Survey) and the Gynaecology Follow-up Survey.

Information was gained concerning individual patients on problems concerning:

the after-effects of treatment

the journey home

home care

communications

The main analysis is on the results of the KDBU Follow-up Survey. Reference is made to results obtained from the Gynaecology Follow-up

Survey when these have a bearing on problems revealed by the KDBU Follow-up Survey.

The importance of the Gynaecology Follow-up Survey lay in the fact that gynaecology formed a large part of the work of the Day Bed Unit, Kirkcaldy, and day bed gynaecology was found to raise important questions in the management of patients eg the management of post-operative after-effects and post-operative care in general in the home.

1. The Kirkcaldy Day Bed Unit Follow-up Survey

All patients passing through the unit during the period of the survey were included with the following exceptions:-

Patients aged less than 16 years

Accident and emergency patients

Psychiatric patients (ECT)

Each patient was given a questionnaire (see Appendix XV) on leaving the unit and asked to complete and return it by post one week after the return home. A letter of reminder was sent to those patients not replying at three weeks and again at six weeks from the date of treatment.

The questions were concerned with the after-effects of treatment and the reaction of patients; the journey and its discomforts; domiciliary problems; the difficulties found by patients in gaining information.

A record sheet containing further additional clinical and social information was prepared for each patient from the DBU Patient Record Sheet and this was attached to the appropriate returned questionnaire. The combined data on each patient were then

transferred to punch cards and thereafter tabulations compiled by means of a computer.

A pilot survey of 100 patients was conducted successfully during February 1969. The main survey took place between 6 May and 3 July 1969. The number of patients given questionnaires was 340. The number of valid questionnaires completed and returned was 327, giving a response of 96%.

Details of the population, the treatment given and the specialties involved are given in Appendices VII and VIII.

2. The Gynaecology Follow-up Survey

The same method was adopted in the attitude survey of gynaecology day bed patients in the Royal Infirmary of Edinburgh. All day bed patients passing through the Gynaecology Department between 8 May and 4 July 1969 were included. The patients were treated either in the out-patient department using the out-patient theatre and a four bed day ward for recovery, or in the in-patient area making use of an in-patient theatre and in-patient beds for recovery.

The topics covered in the questionnaire were similar to those of the KDBU Follow-up Survey with a few exceptions. An additional patient clinical/social record sheet was prepared as in the KDBU Follow-up Survey and processing of data was carried out in a similar way.

Details of the population and treatment are again given in the Appendix.

Study on the Change in Pattern of Hospital Care

This was examined in two ways:

i. Change in the duration of stay for different types of cases.

ii. Change in the number of potential day cases

The required information, clinical and social, was extracted from

- the operating theatre record books
- the DBU patient record sheet
- the clinical case records

The information was recorded on another specially designed patient record form (Appendix XVI) and tabulations were produced manually.

Study on the Effect of the DBU on the Waiting List for Minor Operative Procedures

There was no information available on waiting lists for procedures suitable for day bed care prior to the year of the study. However, attempts were made by the nurse/receptionist to obtain the number waiting for minor procedures by specialty at monthly intervals. This system broke down because there was no clear indication as to whether the treatment would be carried out as an in-patient or day-patient and because of difficulty experienced in identifying minor procedures.

However, a measure of the effect made by the introduction of the Unit on the waiting lists was obtained by examining the change in waiting time for each specialty, the data being obtained from the DBU Patient Record Sheet.

Study of Patients Admitted as In-patients as a Result of Complications Arising from Treatment in the Day Bed Unit

i. Information was collected on patients sent home after day bed unit treatment and subsequently admitted to the in-patient wards.

A period of three months ending 8 October 1968 was surveyed.

The information was prepared by the Hospital Records Department by comparing each DBU Patient Admission Slip, completed by that department, and the In-patient Admission Index. Patients admitted as in-patients within 7 days of treatment (a period arbitrarily chosen) were thus identified.

ii. Information was also collected on patients admitted to an in-patient ward from the DBU. This information was collected using the DBU Patient Record Sheet for 12 months ending 31 May 1969.

Finally, information was derived on all aspects of day bed unit care from discussions with consultants in each of the specialties using the unit, radiologists and anaesthetists with the hospital nursing staff, the hospital social work department and offices of the Area Ambulance Service.

CHAPTER II.2

DESCRIPTION OF THE DAY BED UNIT AND THE OPERATIVE PROCEDURES CARRIED OUT

A major part of the present study was conducted on the work of the Kirkcaldy Day Bed Unit. This unit opened in February 1968 as part of the Phase 2 Development of Victoria Hospital, Kirkcaldy, the aim being to provide day bed care facilities for investigation and treatment for all specialties in the hospital.

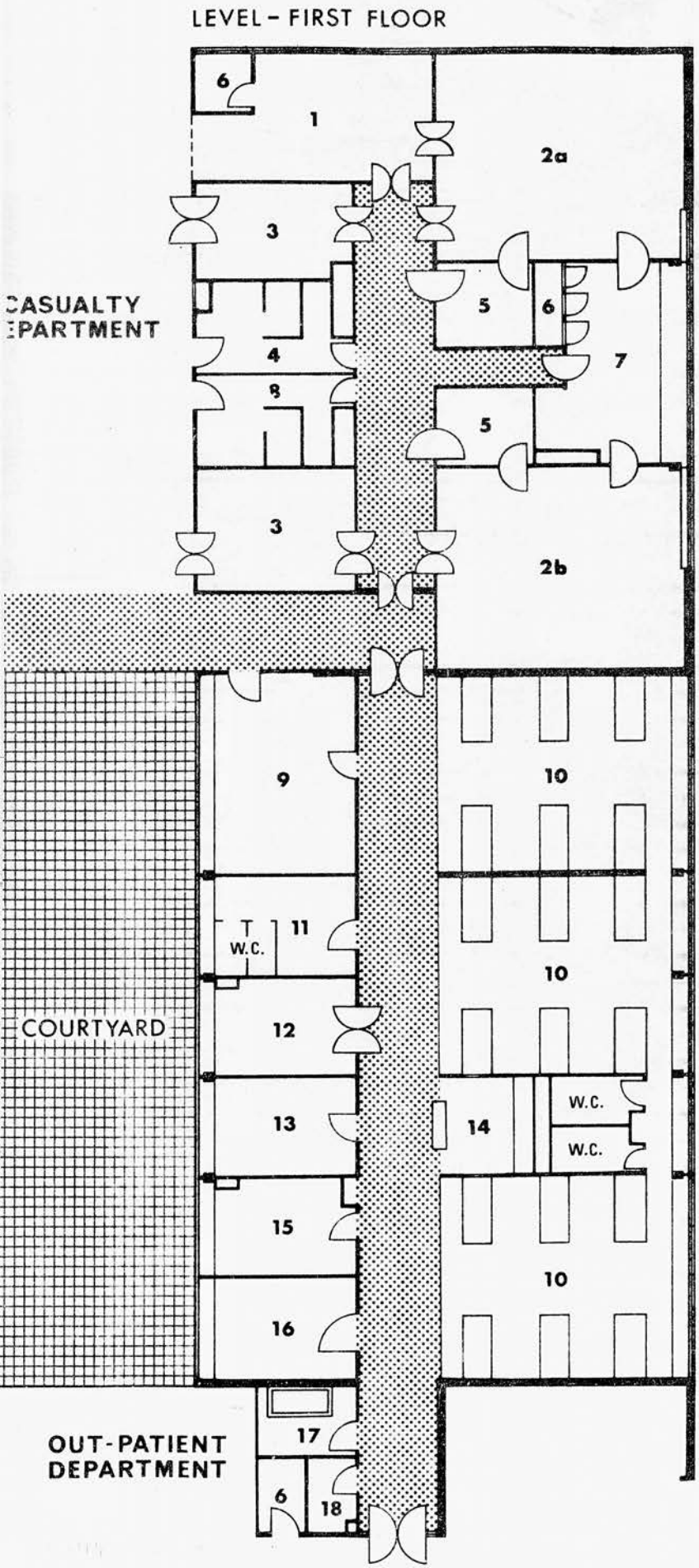
i. System of Care - Outline of Facilities, and Organisation Facilities

The unit is part of the out-patient complex, lying at first floor level between the General Out-Patient Department and the Casualty Department. The ward is basically similar in design to the in-patient wards with eighteen beds arranged along one side of a central corridor in three bays, each containing six beds. Each bed is served by a piped oxygen point and there is access to a suction point, one being placed on each side of a bed bay. The nursing station is situated centrally on the same side of the corridor as the bed bays.

On the other side of the corridor are arranged a waiting/rest room, treatment room, patient changing room/bathroom, kitchen and two utility rooms. The waiting/rest room where all patients are received and from which most are discharged can seat fifteen patients. This room also contains the desk of the nurse/receptionist who is thus able to supervise patients resting or waiting for transport home.

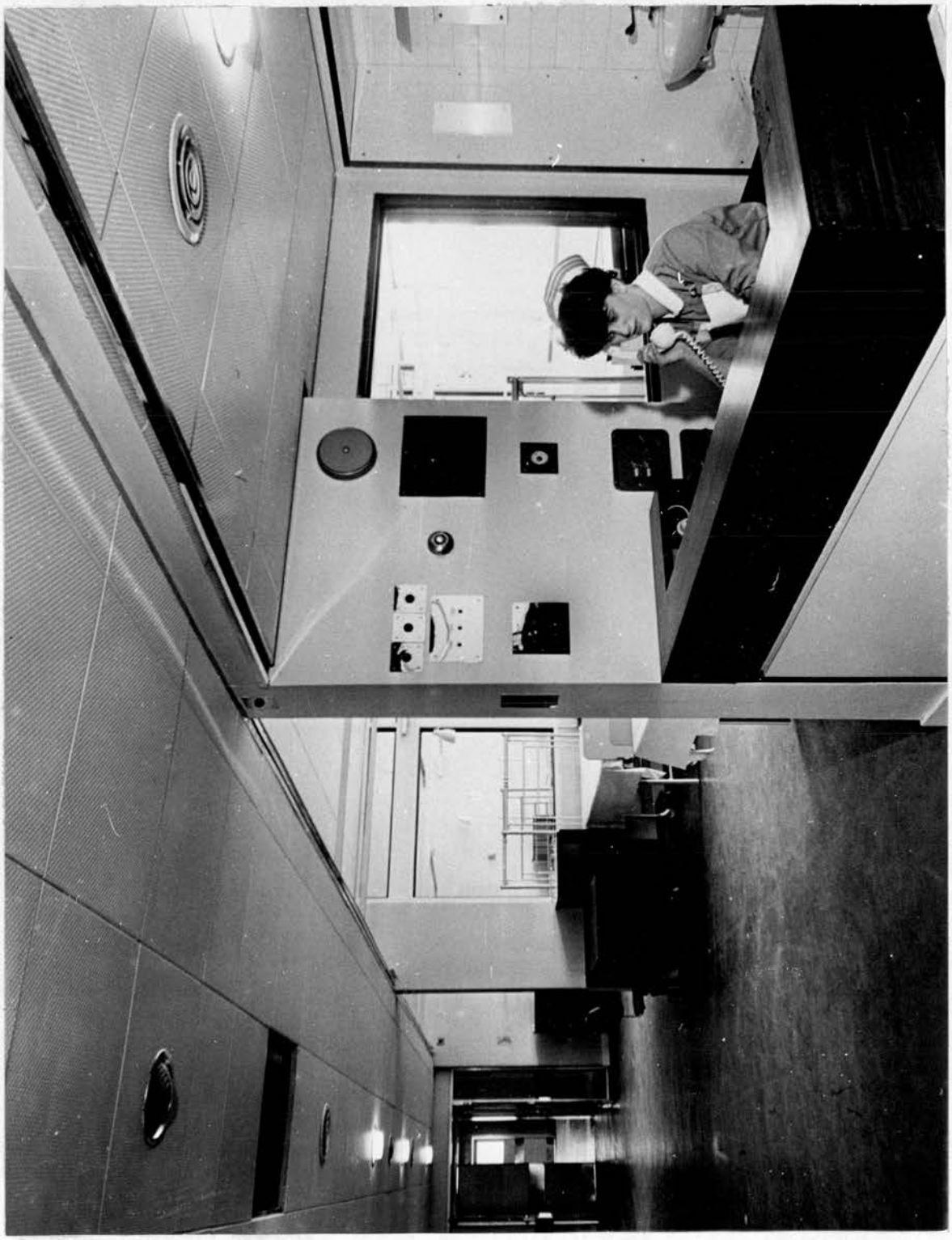
GURE 1

DIAGRAM OF DAY BED UNIT, VICTORIA HOSPITAL, KIRKCALDY



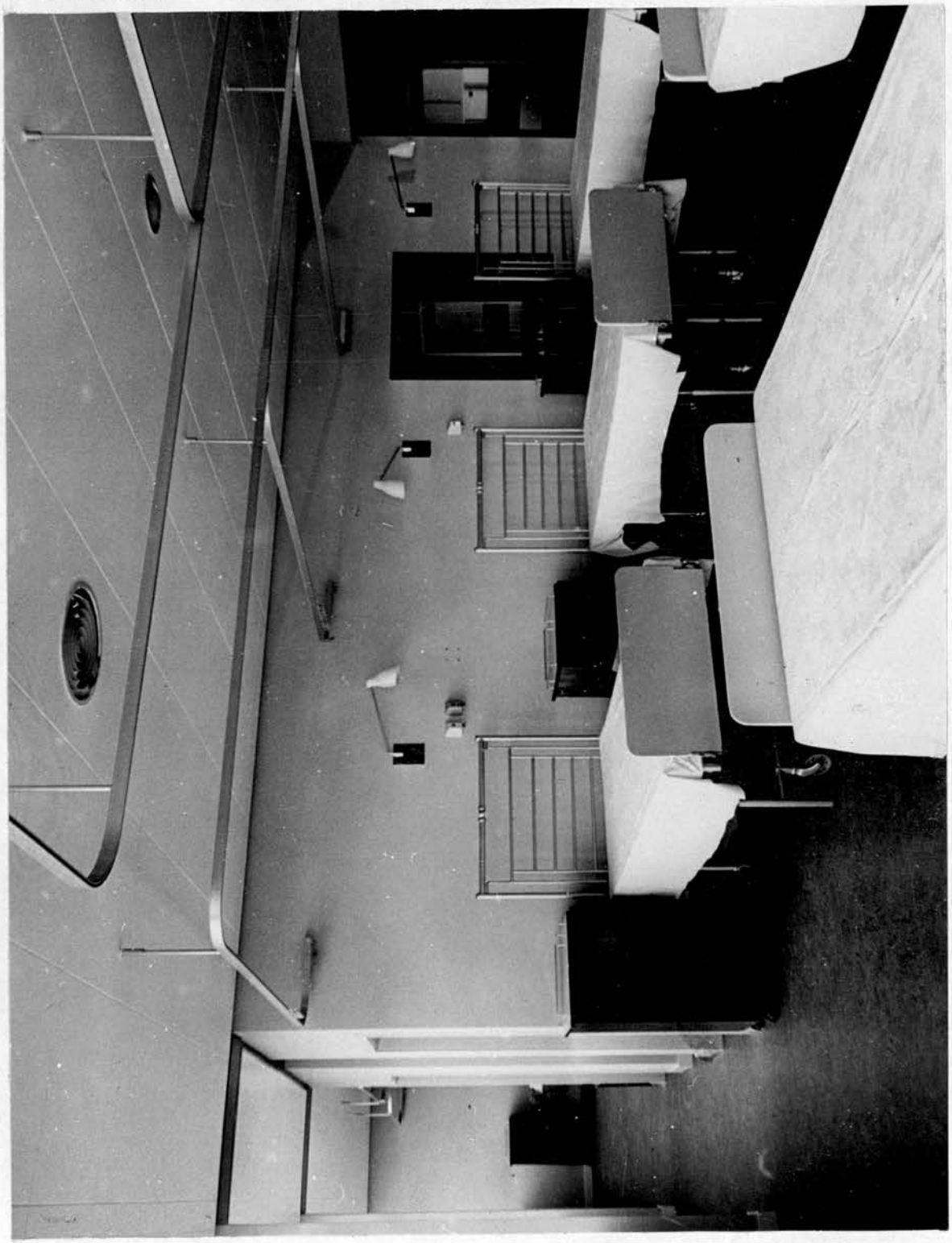
1. Plaster Room
2. (a) Theatre (Casualty)
   (b) Theatre (Day Bed Unit)
3. Preparation
4. Female Staff Changing and Lav.
5. Clean Up
6. Stores
7. Sterilisation
8. Male Staff Changing and Lav.
9. Waiting/Rest Room
10. 6 Bed Ward
11. Patient's Changing
12. Treatment
13. Preparation Room
14. Nurses Station
15. Disposal Room
16. Kitchen
17. Bath
18. Linen

THE DAY BED UNIT VICTORIA HOSPITAL KIRKCALDY. NURSING STATION AND WARD AREA.



THE DAY BED UNIT VICTORIA HOSPITAL KIRKCALDY.

A SIX BED BAY.



The treatment room is equipped with an operating table and piped oxygen and suction, enabling a variety of operative procedures requiring general anaesthesia to be carried out there.

The theatre suite lies adjacent to the day bed ward and comprises two theatres each with a utility room, two anaesthetic rooms (male and female), and changing rooms with showers. A sterilising room is situated between the theatres. One theatre is primarily for the use of the Casualty Department and the other for the Day Bed patients, but both are used for casualties if the need arises.

Staffing Arrangements

The medical superintendent is in overall administrative charge. There are no clinicians directly attached, each specialty being responsible for its own patients. In the same way, the anaesthetists work on a sessional basis.

The full-time nursing staff consists of three nurses, one SEN, one auxiliary nurse and the nurse/receptionist, while the part-time nursing staff includes the sister, two staff nurses, one SEN, and one auxiliary nurse. In addition to ward nursing duties the Unit nurses staff the day bed theatre, clean it between sessions and transport patients to and from theatre. The casualty sister is in overall charge of the operating theatre suite.

General Procedure

The unit is open from 8 am to 6 pm Monday to Friday, and is worked on a sessional system with basically 2 main sessions - morning and afternoon. Sessions have been allocated to all specialties wishing

to take part. In the timetable a certain amount of overlapping of sessions may occur, especially during the morning.

The beds in the bay adjacent to the casualty department may be used where possible for accident and emergency cases or for patients who may take longer than the anticipated time to recover following treatment in the unit.

The majority of patients for day bed care are placed on the waiting list at out-patient consultation, and admitted directly from their homes. A small proportion are admitted to the unit from the in-patient wards and following treatment are discharged back to their own ward. Another small group are admitted immediately from the out-patient department - usually the casualty department - and these cases may be classed mainly as emergency admissions.

For waiting list cases the procedure is as follows:-

The requests for day bed unit admission are made by the hospital medical staff to the Records Department which then compiles lists of patients for each session, notifying the patient usually by letter. At the same time patients scheduled to have general anaesthesia are warned not to eat, drink or drive on the day of the operation. The Records Department supplies case notes and X-rays a day in advance of admission to enable the receptionist to complete bed name labels and name tags for anaesthetic record sheets. Knowledge of home circumstances of patients is obtained by the hospital clinician at the out-patient consultation either from the patient himself or from

the letter sent by the general practitioner. Normally no assessment of the domestic situation is made by the hospital social work department.

On arrival at the unit for treatment the patient is booked in by the receptionist. Male patients undress in the Changing Room, where there is some lockable storage space, in addition to two WCs and hand wash facilities. Female patients undress at the bedside. The only WCs to which they have access are two adjoining the middle bed bay.

Patients for general anaesthesia are examined by the anaesthetists and a decision is made at this point as to their fitness for anaesthetic. Details of the type of treatment carried out are given in the next section.

Following treatment patients are given time to recover in bed before dressing. Since the work of the unit is geared to a morning and afternoon session, the aim must obviously be to discharge the morning patients by the end of the morning and the afternoon patients by the end of the afternoon. Patients too unwell following treatment are permitted to remain in bed longer than the duration of one session. Patients clearly unfit to travel home are admitted to an in-patient ward. There is no standard discharge procedure. The patient may be examined by a clinician prior to discharge, but in many cases the sister or nurse-in-charge decides whether the patient is fit to go home.

When considered fit to travel, the patient walks to the waiting/ reception room and the receptionist telephones for an ambulance or

"sitting car". Patients who have arranged to travel home by private car also wait here. The time of arrival of private transport however, is usually pre-arranged by patient and sister at the time of the admission. There is therefore possibly less delay in waiting for transport home for the "car" patient than for those using the ambulance service to take them home.

The general practitioner is informed by letter posted on the day of treatment, but the local health authority receives no routine notification.

ii. Range of Operations and Investigations carried out in the DBU Kirkcaldy

For the year ending 31 May 1969, the number of cases treated was 3,261. The number of cases by specialty is shown in Table 1.

TABLE 1: NUMBER OF CASES BY SPECIALTY ATTENDING KDBU IN YEAR ENDING 31 MAY 1969

Specialty	Number	Percentage
General Medicine	218	6.7
General Surgical	772	23.7
Orthopaedic	328	10.1
Urology	684	21.0
Gynaecology	287*	8.8
Psychiatric	501	15.4
ENT	217	6.7
Casualty	245	7.5
Other	6	0.2
Not Recorded	3	0.0
Total	3,261	100.0

*Gynaecology 7 months only

Eight specialties used the Unit. The specialty making the most use was general surgery closely followed by urology and psychiatry.

Because of a lack of operating equipment, gynaecology only made full use of the unit during the latter seven months of the year studied.

Casualties are shown separately. The main value of the unit to the Casualty Department lay in the rest facilities - beds and rest room. All the treatment of casualties was carried out in the Casualty Department itself.

The operations or procedures carried out in the Unit are now considered. A summary is given in Table 2 with a more detailed grouping in the Appendix III.

The two highest numerically were:-

i. Electro-convulsive therapy

ii. Cystoscopy - including urethroscopy, diathermy of bladder: retrograde pyelogram.

Dilatation of cervix and curettage would probably be the next highest if gynaecology procedures had been carried out in the unit for the whole of the year studied.

TABLE 2

OPERATIONS/INVESTIGATIONS IN KIRKCALDY DAY BED UNIT
YEAR ENDING 31 MAY 1969

	Number	Per Cent
Electroconvulsive Therapy	506	15.5
Cystoscopy	404	12.4
Exc. Superficial Cyst	276	8.5
D & C/C	248	7.6
Bowel Wash Out (X-ray)	236	7.2
Urethral Catheter	209	6.4
Gastric Test Meal	173	5.3
Proof Puncture (Nasal Sinus)	118	3.6
Secondary Wound Treatment	103	3.2
Joint Manipulation	93	2.9
Bouginage (Urethral)	83	2.6
Abscess Incision	72	2.2
Minor Ops. on Bone	64	2.0
Plasters and Splintage	59	1.8
Minor Ops. on Tendon/Muscle	57	1.8
Observation	64	2.0
Lumbar Puncture	63	1.9
Oral & Minor ENT (excl. Proof Puncture)	60	1.8
Avulsion of Nail	51	1.6
Varicose Vein Injection	49	1.5
Others (incl. : Sigmoidoscopy Manipulation of Nose Sternal Marrow Puncture Reduction of Fractures Insertion of Coil and Pessaries	273	8.4
Total	3,261	100.0

Comparison with Day Bed Units Elsewhere

Information on the types of procedure carried out at day bed units was obtained direct from three hospitals - two in this country and one in the United States as follows:

Shotley Bridge General Hospital, County Durham. (Table 3)

Stoke-on-Trent (Table 4)

George Washington University Hospital, Washington DC, USA. (Table 5)

TABLE 3

PROCEDURES CARRIED OUT IN DAY BED UNIT, SHOTLEY BRIDGE HOSPITAL

DURING APRIL 1969

	No	Patient Attendance Per Cent
GENERAL SURGERY		
Excision of Skin Lesions (including cysts and verrucae)	12	20.0
Avulsion of Nail	9	15.0
Hernia Repair	1	1.7
Anal Dilatation	1	1.7
UROLOGY		
Cystoscopy	16	26.7
Urethral Dilatation (Bouginage)	4	6.7
ORTHOPAEDIC/CASUALTY		
Manipulations (fractures and dislocations)	8	13.3
Repair of Lacerations	6	10.0
ORAL SURGERY		
Dental Extractions	3	5.0
TOTAL	60	100.0

TABLE 4

PROCEDURES CARRIED OUT IN DAY HOSPITAL, STOKE-ON-TRENT

DURING MARCH 1968

	Number	Per Cent
GENERAL SURGERY		
Dressings (including suture removal)	106	20.3
Varicose Vein Injections	103	19.7
Excision Sebaceous Cysts; Fibromas; Moles; Lipomas etc	41	7.9
Biopsies (including skin and drill biopsies)	22	4.2
Enemas	10	1.9
Circumcisions	10	1.9
Sigmoidoscopy: Proctoscopy	8	1.5
EUA Avulsion of Nail; Skin Tag; Chalazion; Diathermy Naevus	5	1.0
Inguinal Hernia Repair	1	0.2
Upper Phrenectomy	1	0.2
UROLOGY		
Cystoscopy	29	5.6
Urethral Bouginage	14	2.7
Change Catheter (Urethral)	4	0.8
PLASTIC SURGERY		
Excision of Scars Z plasty of Face: Dermabrasion of Cheek	4	0.8
GYNAECOLOGY		
D & C/ Cautery of Cervix	126	24.1
Insertion of Intra-uterine Device/ Vaginal Pessary	12	2.3
ORAL: ENT OPHTHALMIC		
Dental Extractions	21	4.0
Myringotomy	3	0.6
Filing "Nasal Lump"	1	0.2
Contact Lens Impression	1	0.2
Total	522	100.0

TABLE 5

PROCEDURES CARRIED OUT IN THE "IN AND OUT" DEPARTMENT, GEORGE WASHINGTON UNIVERSITY HOSPITAL, WASHINGTON DC, IN MARCH, 1969

		Per Cent
ORTHOPAEDIC SURGERY		
Interdigital Neuroma	3	7.1
Release Trigger Finger	2	
Manipulations	1	
Open Phenol Ulnar Nerve Block	1	
Excision Tendon Sheath	1	
Excision Plantar Warts	1	
Removal Foreign Bodies	1	
Removal Pins from Limbs	2	
Excision Bursa	1	
Repair Mallet Finger	1	
PLASTIC SURGERY		
Excision Lesions, Moles Tumors etc of Face, Nose, Eyes and Scalp	32	18.3
Scarplasty and Hair Stripping	3	
Frenulectomy	1	
ORAL SURGERY		
Multiple Extractions	1	0.5
OPHTHALMOLOGY		
Excision Chalazion of Eye Lids	2	1.0
GYN SURGERY		
D & C, B & C, Cauterization, Punch Biopsy, Conization, Insertion of Coil and Pessary	30	24.4
Hysterosalpingogram	13	
EUA and EKG of Fetus	1	
Hymenotomy	1	
Baby Circumcision	1	
Bartholin Cyst	2	
UROLOGY AND UROLOGY SURGERY		
Uretheral Warts	1	8.1
Fulguration of Bladder Tumour	2	
Cystometrics, Cystograms and Retrograde Pyelograms	6	
Circumcisions	4	
Urethroscopy and Meatotomy	1	
Testicular Biopsy	2	
GENERAL SURGERY		
Excision of Lesions, Tumors, Mass, Lumps, etc	62	38.6
Suture of Old Wounds	1	
Excision of Ganglion	2	
Cryosurgical Destruction of Lesions	3	
Excision Ingrown Toe Nails	3	
Excision Lymph Nodes	2	
Biopsy of Breasts	2	
I & D of Abscess	1	
ENDOSCOPY		
Sigmoidoscopy	1	2.0
Direct Laryngoscopy	1	
Bronchoscopy	1	
Esophagoscopy	1	
TOTAL	197	100.0

In addition, the following information on procedures carried out in other day bed units was obtained from the literature.

Bateman (1966) described the work of the day ward in the Royal Southern Hospital, Liverpool, opened in 1964. The types of procedure conducted were all in the minor category as follows:-

Medical	Orthopaedic
Lumbar puncture	Reduction of fractures
Fractional test meals	Injections into joints
Glucose tolerance tests	Aspiration of joint effusions
Urea clearance tests	Excision of ganglia
Blood specimens for laboratory tests	Changes of plaster of Paris
	Manipulation of joints

Surgical

Endoscopic examination

- Cystoscopy
- Sigmoidoscopy
- Gastroscopy

Removal of sebaceous cysts: lipomata

Biopsy of skin lesions.

The work of the day bed unit at Sheffield Royal Infirmary included repair of hernia as well as more minor procedures such as, excision of sebaceous cysts, ganglia, sigmoidoscopy and injection of haemorrhoids. (Brown, 1964).

In the day bed unit opened at Walton Hospital, Liverpool in 1967 medical, general surgical and orthopaedic procedures were carried out

(Hall, 1969). In the month reported, 250 patients were treated including 30 who had a hernia repair (inguinal, femoral and umbilical) and 26 who had unilateral stripping of varicose veins.

In the United States, Cohen and Dillon (1966) described the broad range of procedures carried out by the Out-patient Surgical Service at the University of California, Los Angeles (UCLA) Centre for the Health Sciences instituted in 1962. In a two month period examined, 1,523 patients were treated of whom 804 required 'major' anaesthesia requiring the services of an anaesthetist. 551 patients came from four services: gynaecology, ophthalmology, urology and plastic surgery, the most frequent operations being diagnostic dilatation and curettage, eye examination and cystoscopy.

In Canada, Davenport, Shah and Robinson (1971) described procedures carried out in the ten bedded children's Day Care Surgical Unit. These included teeth extraction and repair, myringotomy, cystoscopy and panendoscopy, excision of superficial lesions, herniorrhaphy, squint repair, removal and reapplication of casts, removal of pins, closed reduction of fracture, resection of toe nail.

It is clear from this examination that certain differences in the types of procedure existed. Thus hernia repair was carried out to any extent at only two centres - Sheffield Royal Infirmary and Walton Hospital, Liverpool, while ECT was only performed at Kirkcaldy. This procedure is more usually carried out in psychiatric units, and it is of interest to note that ECT will eventually be performed as a day-bed procedure in the new Psychiatric Day Centre which is planned for Victoria Hospital. ECT on a day basis is not peculiar to this

hospital. The only unusual feature lies in the fact that it was carried out in an acute general hospital and not in a psychiatric unit.

Gynaecology formed an important part of the work at four of the units, two in this country and two in the United States. The fact that no gynaecology procedures were performed at Shotley Bridge may be related to the relative ease with which admission to an in-patient bed was obtainable in the North-Western Durham area.

At Stoke-on-Trent no orthopaedic procedures were carried out, while accident cases were managed at two centres, Shotley Bridge and Kirkcaldy.

Nevertheless, in spite of the wide range of procedures carried out there are similarities in the characteristics of the care conducted in the units examined. Many of the procedures may be classed as "minor" and these greatly outnumber the "intermediate" procedures, such as hernia repair. (Classification of "minor" procedures is given in Appendix V).

In this respect the pattern of day bed care in these units was therefore different from the moderately severe or "intermediate" surgery described by Farquharson or Stephens and Dudley in their published account of day bed care.

Cystoscopy was performed in five of the nine day bed units. While D & C/C and other gynaecology procedures were carried out in four of the eight day bed units treating adults.

Excision of skin and other superficial lesions was carried out at six centres while orthopaedic procedures were known to be undertaken at six. These were commonly: manipulation of fractures and joints, removal and application of casts, and minor bone, ligament and tendon operations.

Examining now the available figures: 29.7% of the total number of cases treated at Stoke-on-Trent in a month's sample survey consisted of D & C/C and cystoscopy, while by including the procedures excision of skin lesions[1], biopsies, wound dressings and varicose vein injections, the combined group accounted for 82.6% of cases. At Shotley Bridge, the largest groups were cystoscopy, excision of superficial skin lesions, followed by avulsion of nail and manipulation of fractures and dislocations. At the George Washington Hospital, the specialties using the unit were urology, gynaecology, plastic and general surgery and orthopaedics. In a month's sample of cases, 32.5% of all cases were in gynaecology and urology. General surgery and plastic surgery, which consisted mainly of excision of superficial lesions, accounted for a further 56.9%.

At Kirkcaldy, cystoscopy, D & C/C and excision of superficial lesions numbered amongst the four largest groups, while at the Out-patient Surgical Service Centre, University of California, Los Angeles, the diagnostic D & C/C and cystoscopy were amongst the commonest procedures performed.

The similarity in the procedures in these units indicated a consensus of opinion among clinicians that procedures of this type and this degree of severity were suited to care on a day basis within the

[1] excision sebaceous cysts, fibromas, moles lipomas and scars etc.

facilities and organisation available. Using the Kirkcaldy Unit as a model the aim was to demonstrate the facilities and organisation which are necessary to carry out this pattern of day care. In order to achieve this objective, the demographic, social and clinical characteristics of the population passing through were examined as well as the organisation of the unit. The aim was to establish whether problems, social or clinical, might be expected to arise in patients treated in Kirkcaldy Day Bed Unit - whether in the population as a whole or in certain vulnerable groups within the population treated.

CHAPTER II.3

THE PATIENTS AND THEIR PROBLEMS

i. Age, Sex and Marital Status

On clinical grounds one might expect a DBU to be particularly suitable for children and for fit middle aged people and perhaps less suitable for the elderly since the elderly are less mobile and less able to cope with domestic difficulty.

The percentage distribution by age and sex of all patient attendances at Kirkcaldy Day Bed Unit during the year ending 31 May 1969 is shown in table 6.

TABLE 6: PERCENTAGE DISTRIBUTION OF AGE AND SEX OF PATIENT ATTENDANCES AT KIRKCALDY, YEAR ENDING 31 MAY 1969

Age	Males	Females	Total
	%	%	%
0–4	3.0	1.7	2.4
5–14	9.0	5.5	7.2
15–44	36.4	49.6	43.0
45–64	30.0	30.0	30.0
65–74	12.9	10.3	11.6
75+	8.8	2.9	5.8
TOTAL	100.0	100.0	100.0
No of Patients	1,587	1,604	3,191

NOTE: For 38 Male and 32 Female patient attendances the age was not known (2.1% of total attendances)

The age distribution of the patients attending the DBU showed that few children but a surprisingly high proportion of the elderly passed through the unit.

The expected excess of females among the elderly is not found. In order to examine more directly the population bias of the DBU population, age specific attendance rates were calculated for patients resident in Kirkcaldy (table 7). This geographical restriction was necessary because of difficulty in defining the hospital catchment population. It was believed that only a small number of patients resident in Kirkcaldy would travel to other hospitals for this type of hospital care. Within the smaller defined population catchment area there were nevertheless over 1,000 patients or approximately one third of the total number of patients treated in the unit in the year.

TABLE 7: AGE SPECIFIC ATTENDANCE RATES OF PATIENTS RESIDENT IN KIRKCALDY AT KIRKCALDY DAY BED UNIT, YEAR ENDING MAY 31 1969

	AGE SPECIFIC RATE PER 100 POPULATION			
	0–14	15–44	45–64	65+
MALES	0.6	1.9	2.9	5.4
FEMALES	0.5	1.9	2.3	2.2

The rate was lowest in the 0–14 age group with a rise in the older age groups. Over the age of 45 the rate was higher in both sexes, but rose more steeply in the males, reaching its highest level in the age group 65 years and over at 5.4 per 100 population. This finding in relation to the elderly in this particular out-patient population is in direct contrast to the findings of Scott & Gilmore (1966) Backett et al (1966) and Forsyth & Logan (1968) in their studies on out-patient populations. They reported that the elderly were under-represented.

Attendance at a DBU might imply the existence of family support, someone to accompany the patient to the unit or to look after domestic affairs in their absence. If this was so, one might expect a relative deficiency in the number of persons living alone or in the number of single and perhaps widowed and divorced persons particularly in the older age groups.

However, table 8 shows that there were a substantial number of such patients who passed through the unit. More than a third of men aged 65 and over were single, widowed or divorced as were as many as 47.6% of the females of this age. The total number of patients, male and female, widowed, single and divorced aged 65 and over was 216.

TABLE 8: MARITAL STATUS OF PATIENTS ATTENDING KIRKCALDY DAY BED UNIT PERCENTAGE DISTRIBUTION FOR YEAR ENDING 31 MAY 1969

Marital Status	Age 15 - 64		Age 65+	
	Male	Female	Male	Female
Married	71.9	79.5	63.9	52.5
Single	22.7	16.9	13.6	14.9
Widowed (incl separated & divorced)	5.4	3.7	22.6	32.7
Total	100.0	100.0	100.0	100.0
Number	1,008	1,257	332	202

Not included - Marital Status - no record, 45 males, 20 females age 15-64 years
no record, 12 males, 9 females age 65 years +
Age - no record, 17 males, 21 females - married
8 males, 5 females - single
6 males, 4 females - widow, separated, divorced
Marital Status and Age - no record - 7 males, 2 females

Procedures

The procedures undertaken at different ages and in the elderly in particular were next examined. Table 9 shows the principal procedures performed, by age group and sex on all patients treated in the DBU during the year studied.

In children, sinus proof punctures and other minor ENT operations are by far the most frequently performed procedures.

In the 15–44 age group in males, investigation by gastric test meal was commonly carried out while ECT was frequently conducted in males aged 15–44 and in females in a wide age range from 15 to 74 years.

From 45 years and over the urogenital procedures - cystoscopy and urethral catheterisations - are important in both sexes and these two procedures together with urethral bouginage accounted for 65.4% all procedures carried out in males aged 65–74 and 75% in males aged 75 years and over. It is clear, therefore that urogenital procedures accounted for the high proportion of the elderly and particularly male patients who passed through the unit.

In their studies of out-patients, Wadsworth and Butterfield (1966) showed that genito-urinary patients, tended to be more elderly than patients in other specialties. 14% of genito-urinary patients in their series in Guys Hospital were 65 years and over. It has already been shown that urogenital procedures were commonly performed in other day bed units examined and it is reasonable to assume, therefore, that a high proportion of these were performed on elderly patients.

TABLE 9: PRINCIPAL OPERATIONS IN RANK ORDER BY AGE AND SEX KIRKCALDY DAY BED UNIT - YEAR ENDING MAY 31 1969

MALES

Children				Working Ages						Elderly			
Age 0-4		Age 5-14		Age 15-44		Age 45-54		Age 55-64		Age 65-74		Age 75+	
OPERATION	%	OPERATION	%	OPERATION	%	OPERATION	%	OPERATION	%	OPERATION	%	OPERATION	%
	(n=45)		(n=143)		(n=578)		(n=238)		(n=238)		(n=205)		(n=140)
Treatment of Wounds	20.0	Proof Puncture Sinus	37.1	Histamine Test Meal	14.5	Cysts	15.6	Cystoscopy	30.3	Cystoscopy	35.1	Urethral Catheter	42.9
Minor ENT	17.8	Minor ENT	14.7	Cysts	14.5	Cystoscopy	13.0	Cysts	12.2	Urethral Catheter	17.1	Cystoscopy	22.1
Faecal Impaction etc	11.1	Manipulation Nasal Bones	7.0	ECT	13.2	Test Meal	10.5	X-ray	11.3	Bouginage	13.2	Bouginage	10.0
Remainder	51.1		41.3		57.8		60.9		46.2		34.6		25.0
TOTAL %	100.0		100.0		100.0		100.0		100.0		100.0		100.0
FEMALES													
	(n=27)		(n=88)		(n=794)		(n=266)		(n=216)		(n=165)		(n=46)
Minor ENT	18.5	Proof Puncture Sinus	48.9	ECT	30.7	ECT	24.4	Urethral Catheter	19.0	BWO with X-ray	24.2	BWO with X-ray	21.7
Ops Tendon	14.8	Minor ENT	10.2	D & C/C	25.8	Urethral Catheter	9.4	ECT	17.1	ECT	17.6	Observation & Rest	17.4
Incp Abscess	11.1	Cysts	6.8	Cystoscopy	9.2	D & C/C	9.4	Cystoscopy	11.1	Cystoscopy	14.6	Cystoscopy	13.0
Remainder	55,6		34.1		34.3		56.8		52.8		43.6		47.8
TOTAL %	100.0		100.0		100.0		100.0		100.0		100.0		100.0

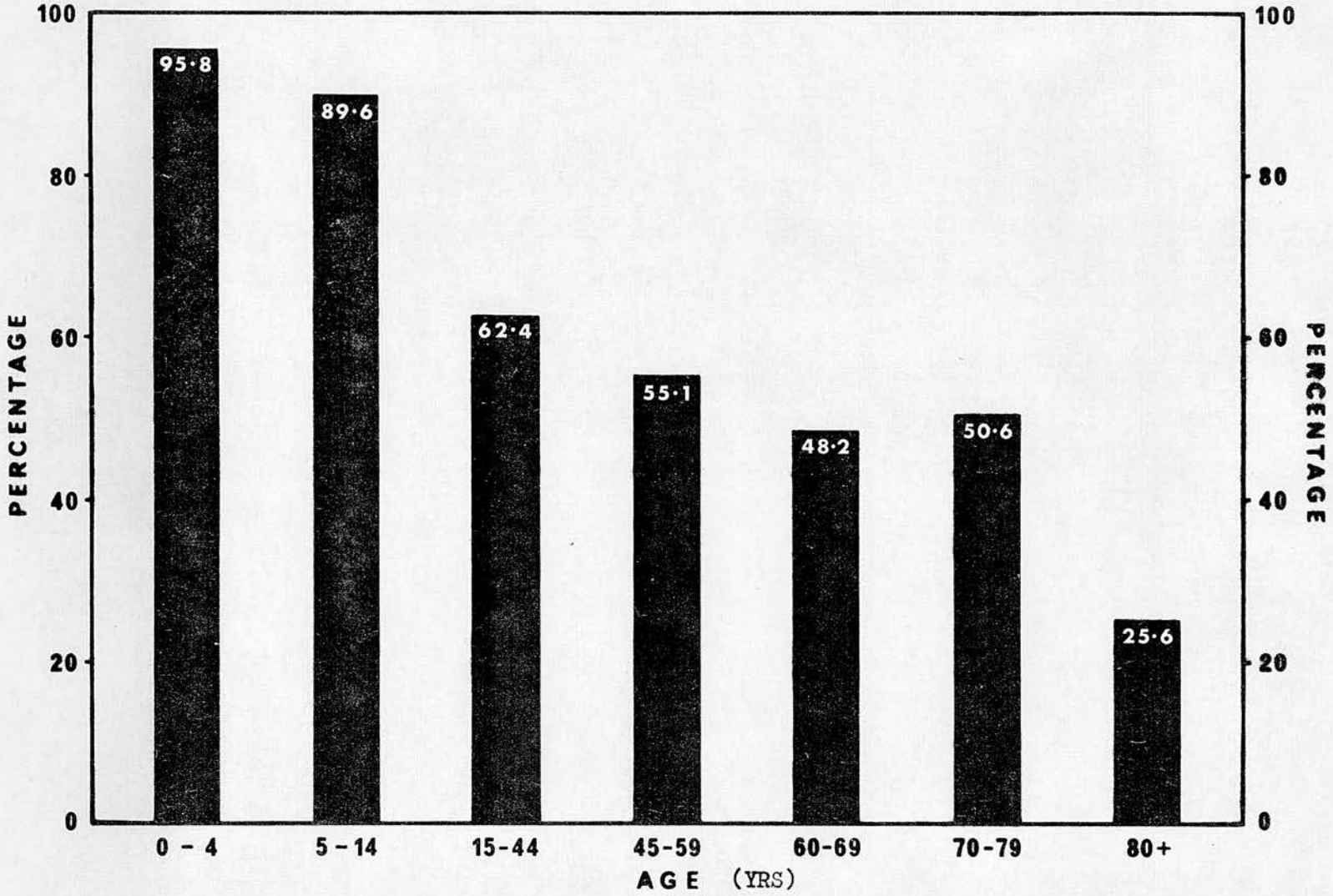
The age of patients who received general anaesthesia was next considered (figure 2.)

91.1% of children were given a general anaesthetic. With increasing age there was a steady drop in this percentage. However, between the ages of 60 and 79 years, 49.1% still received a general anaesthetic (352 patients) and although there was a considerable drop in patients aged 80 years or more, nevertheless 25.6% (22 patients) were given a general anaesthetic.

There are two possible reasons at least, to account for the drop in the proportion of patients receiving general anaesthesia with increasing age.

1. a process of selection which took into account the age of the patient. This might have been patient motivated or GP/consultant motivated or both.
2. a change in the morbidity pattern in the elderly.

PERCENTAGE OF PROCEDURES PERFORMED UNDER GENERAL ANAESTHESIA, BY AGE OF PATIENTS, AT KIRKCALDY DAY BED UNIT DURING YEAR ENDING 31 MAY 1969



ii. Repeat Attendances for Day Bed Care

At each attendance for treatment during the year ending May 31 1969 the number of previous attendances for similar treatment at the DBU was recorded. Attendances prior to the opening of the Unit in February 1968 were excluded. The distribution of repeat attendances by age is shown in table 10.

TABLE 10: PREVIOUS ATTENDANCES BY AGE SINCE OPENING OF KIRKCALDY DAY BED UNIT (FEBRUARY 1968) OF PATIENTS TREATED DURING YEAR ENDING 31 MAY 1969 : PERCENTAGE DISTRIBUTION

Number of Previous Attendances since Feb 1968	Age (Years)								
	0-4	5-14	15-44	45-59	60-69	70-79	80+	Age not Recorded	Total
None	76.4	81.0	72.7	67.9	62.3	60.2	43.0	69.4	69.0
1 - 3	9.7	11.7	16.4	17.2	17.6	21.9	15.1	12.5	16.6
4 or more	-	-	5.5	9.1	15.9	12.3	39.5	9.7	8.7
Not recorded	13.9	7.4	5.5	5.8	4.2	5.6	2.3	8.3	5.7
Total Patient Attendances in Year ending 31 May 1969	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No.	72	231	1,372	711	448	269	86	72	3,261

Over sixteen per cent of the patients attending had similar treatment in the unit 1-3 times previously while 8.7% had a history of four or more previous attendances. In the older age groups the percentage attending four times or more was higher rising to nearly 40% in those over 80 years of age.

The number of previous attendances by main types of procedure carried out in the Unit is shown in table 11.

The procedures with the highest proportion of multiple attendances were ECT, change of catheter, and cystoscopy. Since ECT usually

involves a number of treatments then clearly the majority of patients would be expected to attend the unit on more than one occasion.

Urology patients were shown to be associated with multiple treatments, the conditions treated tending to be of a chronic nature. Thus change of catheter was commonly performed for prostatic hypertrophy and cystoscopy as part of the follow-up assessment of patients suffering from bladder papilloma.

Therefore the more chronic conditions tend to be associated with repeat attendance for treatment and since chronic conditions tend to occur in the elderly this accounts for the increase in repeat attendance at this time of life.

TABLE 11: PREVIOUS ATTENDANCES SINCE OPENING OF KIRKCALDY DAY BED UNIT (FEBRUARY 1968) BY PRINCIPAL PROCEDURES PERFORMED DURING YEAR ENDING 31 MAY 1969 : PERCENTAGE DISTRIBUTION

Number of Previous Attendances since February 1968	Procedure								
	B.W.O. with x-ray	Proof Puncture Antra	Cystoscopy	D & C/C	Excn. Superf. Cysts	Urethral Catheter	E.C.T.	Max. Hist. Test Meal	Wound Treatment
None	89.8	77.1	70.1	92.7	87.3	16.7	21.5	92.5	60.2
1 - 3	0.8	16.1	21.8	1.6	3.0	16.2	50.2	1.2	33.1
4 +	-	-	3.2	-	-	62.3	26.6	0.6	1.0
No Record	9.3	6.8	5.0	5.7	9.8	4.8	1.8	5.8	5.8
Total Patient Attendances in Year ending 31 May 1969	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	236	118	404	248	275	506	103	173	103

iii. Problems in Communication Prior to Entering the Unit

Three communication difficulties are considered here

A. information about the unit before admission

B. notice of entry to the unit

C. difficulty in finding the unit.

A. Information about Unit before Admission

TABLE 12: WHETHER PATIENT WAS INFORMED ABOUT UNIT BEFORE ADMISSION, BY SPECIALTY, PERCENTAGE DISTRIBUTION - KDBU FOLLOW-UP SURVEY

Whether Patient was informed about unit before admission	Specialty						
	Med	Surg	Ortho	Uro	Gyn	ENT	Total
Yes	33.3	19.2	34.5	16.1	32.9	40.0	24.1
No	66.7	80.8	65.5	83.9	67.1	60.0	75.9
Total Patients	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	18	104	29	93	70	10	324

Not included - 1 patient who gave no answer to question on information

2 patients who had attended unit previously.

Only about one quarter of the patients attending had some knowledge of the Unit prior to entry.

About one third of patients attending for general medical, orthopaedic **and gynaecological** treatment had some knowledge. The proportion is lower in general surgery where about 1 in 5 patients had some knowledge and least in urology where 1 in 6 patients had knowledge. This is surprising since many of the patients in urology require to attend more than once.

Knowledge of the Unit, was also examined according to social class (Registrar General's Social Classification of Occupations 1966).

Of 255 patients in whom social class data was obtained, only 11.8% of social classes I and II had information compared with 27.5% of patients in social classes III (Non Manual and Manual) IV and V (Appendix IX). Although social class data was not available for 69 patients, these findings are in general agreement with those of Cartwright (1964) in her studies on in-patients.

B. Notice of Entry to Day Bed Unit

TABLE 13: EXTENT OF NOTICE OF ENTRY TO DAY BED UNIT KDBU FOLLOW-UP STUDY

	Less than 2 days	2 days <1 week	1 week <2 weeks	2 weeks or more	No Answer	Total
Number of Patients	29	166	81	46	5	327
Per cent	8.9	50.8	24.8	14.1	1.5	100.0

The notice given by the hospital of entry to the day bed unit is important since many patients require to make domestic and other arrangements. Twenty-nine patients (8.9%) were given less than two days notice of entry to the unit. While 166 (50.8%) were given notice of two days to one week. Just under half of the patients having the bowel wash out with x-ray investigation, over four-fifths of the cystoscopies and over half the D & C/C operations were given less than one week's notice of entry. These procedures were therefore probably planned within the duration of that week. It is unlikely that this large number of patients required urgent treatment. One way to exclude urgency as a reason for the short notice would be to examine the duration on the waiting list for operation. Taking cystoscopy as an example - with the exception of 13 patients all

were on the waiting list for at least two weeks. Yet 62 cystoscopy patients were given less than one week's notice of entry.

C. Difficulty in Finding Unit

The difficulty experienced by patients in finding the unit was examined. Approximately one patient in twelve had difficulty, indicating that reception of patients left something to be desired. The method of transport of those who had difficulty was shown to be relevant. Only one patient arriving by ambulance had difficulty compared with 26 travelling by other means. The ambulance crew were therefore likely to be carrying out the role of receptionist for their patients. The unit is at first floor level and although there is signposting from the out-patient entrance at ground floor level there may be a need to improve reception of patients which at present takes place in the unit itself. Alternatively adequate direction information might be supplied with the aid of an information sheet sent to patients prior to entry.

TABLE 14: MAIN PROCEDURES AND THEIR AFTER-EFFECTS - KDBU FOLLOW-UP SURVEY

After-Effects (not additive)	Bowel Wash Out and x-ray	Cystoscopy	D & C/ Cautery	Excision Cysts (Superficial)	Gastric Test Meal (Max. Histamine Test Meal)	Injection Varicose Veins	Others	Total After Effects
Bleeding	3	18	28	4	-	-	11	64
Discharge	-	2	31	1	-	-	-	34
Pain - Back	4	5	13	3	-	-	8	33
Stomach	14	5	15	-	3	-	2	39
Head	2	11	24	6	2	2	8	55
Urine	-	37	4	-	-	-	7	48
Throat	-	1	3	-	2	-	7	13
Chest	-	-	-	1	-	-	1	2
Other	-	2	4	3	-	4	10	23
Constipation	7	5	6	1	-	1	3	23
Frequency of Micturition	-	15	8	-	-	-	2	25
Nausea	2	-	4	-	-	-	-	6
Vomiting	-	1	1	-	-	-	1	3
Dizziness	1	4	7	2	-	-	4	18
Fainting	-	1	6	1	1	-	2	11
Cough	-	-	1	-	-	-	1	2
Generally Unwell	9	9	34	7	-	2	17	78
Other After Effects	2	2	3	-	-	-	1	8
Total Patients with one or more after-effects	26	61	61	13	5	6	45	217
Total Patients with no after-effects	24	11	7	17	6	4	37	106
Total Number of Patients	50	72	68	30	11	10	82	323

Not included - 2 "cystoscopy" patients and 2 "others" where after-effects not recorded.

iv. After-Effects of Treatment

The procedures carried out on patients in both follow-up surveys are given in Appendices VIII and XII.

In the KDBU Follow-up Survey two patients in every three treated complained of ill effects after discharge home. Some of these may have been anticipated eg bleeding, following certain gynaecology procedures. Other symptoms were present which were less predictable. A notable one was pain, which manifested itself as headache for 55 patients, dysuria for 48 patients and back pain for 33 patients. More unusual pain eg throat pain (13 patients) and chest pain (2 patients) was probably related to intubation during general anaesthesia.

There were other less usual symptoms. Dizziness was complained of by 18 patients and fainting by 11, again possibly attributable to general anaesthesia.

Examining the main procedures carried out - (Table 14) -

Bowel Washout With X-Ray

Of 50 patients having bowel wash out with x-ray 24 were symptom free. The commonest complaint here was stomach pain (14 patients) followed by those who felt generally unwell (9). The symptoms were generally gastro-intestinal in nature except possibly back pain (4 patients).

Cystoscopy

Of 74 cystoscopy patients only eleven were symptom free. The symptoms were generally related to the urinary tract with 18 patients who bled, 37 who had dysuria and 15 who had frequency of micturition, while four

patients were dizzy, one complained of faintness, one vomited, and nine felt generally unwell after this procedure. Again, pain was a common symptom. Apart from dysuria, five had back pain, eleven headache, one throat pain and two, pain at other sites.

D & C and Related Procedures

Of 68 patients who had a D & C/C only seven were free from after effects. Half of the patients felt generally unwell on return home. Expected symptoms such as bleeding (41.2%) and discharge (45.6%) occurred, but other symptoms were common. Certain of these were related to the urinary tract eg dysuria (5.9%) and frequency of micturition (11.8%) and others possibly related to the anaesthetic - headache (35.3%), pain in throat (4.4%), nausea (5.9%), vomiting (1.5%), dizziness (10.3%) and fainting (8.8%).

A similar picture was revealed in the Gynaecology Follow-up Survey (Appendix XIII). Of 210 patients surveyed only eight were known to have no after-effects. Bleeding, discharge and urinary tract symptoms and pain were common. Just under one quarter of the patients had back pain and one-third had abdominal pain. Symptoms possibly related to the anaesthesia were noted - sore throat (6.7%), chest pain (1.9%), nausea (7.6%), vomiting (2. 9%), dizziness (13.8%), faintness (5.2%), and cough (1.9%). However the commonest symptom was of general debility, as many as ninety seven patients (46.2%) making the complaint.

Worry and After-Effects

Worry concerning after-effects experienced by patients was examined (Appendix IX).

Of 217 patients with after-effects, 16.6% expressed some worry and 1.8% were considerably worried. In the Gynaecology Follow-up Survey 202 patients had after-effects and the corresponding percentages were 15.8 and 2.5. (Appendix XIII.)

It was impractical to relate worry to a particular symptom, but it may be noted that in the KDBU Follow-up Survey over half of those who worried felt generally unwell, 42.5% experienced bleeding, a quarter had headache and just over a quarter had dysuria and the same proportion frequency of micturition. In the Gynaecology Follow-up Survey 81.1% of those who worried felt generally unwell while a high percentage of those who bled, 75.7, stated they worried.

Warning of After-Effects

Patients were asked in the KDBU Follow-up Survey whether anyone discussed possible after-effects of the treatment before leaving the unit. These results showed no evidence that such advice had any effect on the number of patients who worried. However, the advice may not have related to the actual after-effects suffered and this explanation tended to be confirmed in the Gynaecology Follow-up Survey where it was shown that when warning was given of all symptoms actually suffered the number of worried patients was significantly reduced (table 15).

TABLE 15: PATIENTS WITH AFTER EFFECTS: WORRY CONCERNING AFTER-EFFECTS BY WHETHER ADVANCE WARNING WAS GIVEN BY HOSPITAL STAFF - GYNAECOLOGY FOLLOW-UP SURVEY

Warning given by Hospital Staff	No Worry	Worry Present	No Answer	Total Patients
Yes about all after-effects	71	8	7	86
Yes about some after-effects	33	19	1	53
No warning given	33	10	1	44
No answer	8	-	11	19
Total Patients	145	37	20	202

$P < .005$ $X^2 = 13.201$, (2 d.f.) (excluding no answer, row and column)

Action Taken for After-Effects

The following actions taken by the 217 patients in the KDBU Follow-up Survey with after-effects.

TABLE 16: PATIENTS WITH AFTER-EFFECTS : ACTION TAKEN BY PATIENTS : KDBU FOLLOW-UP SURVEY

	Number	Per Cent
Patients Taking Action	109	50.2
Patients taking no action	75	34.6
/No Information Given	33	15.2/
Total Patients with After-Effects	217	100.0

ACTIONS TAKEN			
Contacted	-	Family Doctor	22
	-	Relative	3
	-	Hospital	1
Self Medication	-	Aspirin	31
	-	Other Tablets Medicine etc	49
Other Action			13
		TOTAL ACTIONS	119

The commonest action taken was that of self medication by aspirin, other tablets or medicine (80 patients). The GP was contacted by one patient in ten with after-effects, but the district nurse by none. The hospital itself was contacted by only one patient. This might indicate that the patients did not consider the symptoms sufficiently serious or that the system of care tended to preclude the hospital as a source of help at this time.

However certain patients found the symptoms worrying, and this group turned more to the GP for help (Table 17). Just under one in three took this course of action compared with one in twenty-five amongst those with no worry. The single patient who contacted the hospital was among the group who were worried about after-effects. One patient in **four** who worried did nothing about it. The results of the Gynaecology Follow-up Survey were broadly in agreement with these findings (Appendix XIV).

TABLE 17: PATIENTS WORRIED ABOUT AFTER-EFFECTS : ACTION TAKEN : KDBU FOLLOW-UP SURVEY

	Whether worried about after-effects			
	No worry		Worried	
	Number of Patients	% of Total Patients with no worry	Number of Patients	% of Total Patients with worry
Nothing	60	42.3	9	22.5
Contacted GP	6	4.2	12	30.0
Contacted Relative	1	0.7	2	5.0
Contacted Hospital	-	-	1	2.5
Took Aspirin	24	16.9	6	15.0
Took other Tablets	35	24.7	9	22.5
Other Action	10	7.0	3	7.5
No answer	11	7.8	3	7.5
Total Patients (Non Additive)	142		40	

Not included: 35 patients who did not answer whether they worried about after-effects.

The actions which they took - Contacted GP (4) Took aspirin (1) Took other tablets/medicines (5). 6 took no action. 19 did not answer.

v. Home Support and Domiciliary Problems

The following factors were considered:

1. Home Support
2. Role of the Family Doctor and the Hospital in the Post-operative Period
3. Role of the District Nurse
4. Domestic Difficulties
5. Return to Domestic Duties
6. Return to Work
7. Amenities in the Home

1. Home Support

Since patients return home within a few hours of treatment in a day bed unit the fitness for such care must depend to some extent on the adequacy of the domestic care, even for relatively trivial procedures.

As part of the main survey of KDBU (for the year ending 31 May 1969) information was sought on the availability of home care. Each patient was asked on arrival at the unit for treatment whether there was someone living at home who was capable of summoning medical assistance if required. Of patients reporting they had no-one at home, 101 were aged 60 years or more (age not recorded, 6 patients).

Ninety five of these with no attendant were widowed. This was 60.1% of all those with no attendant, and 43.2% of the total number of widowed patients.* Identification of some of these with no-one at home could therefore be facilitated by concentrating the enquiry

*Footnote - total number of widowed, excluding separated and divorced, patient attendances at KDBU in year ending 31 May 1969 was 220)

on the widowed. In the case of single patients, there were only 32 of the total of 516 treated in the year who had no-one at home, so that scrutiny of this group would be less fruitful. 85 of the patients with no attendant at home received a general anaesthetic, that is, 4.4% of all those receiving general anaesthesia during the year studied. (Table 18).

TABLE 18

ATTENDANT AT HOME BY TYPE OF ANAESTHETIC (PERCENTAGE DISTRIBUTION)
KIRKCALDY DAY BED UNIT : YEAR ENDING 31 MAY 1969

Anaesthetic	No Attendant	Attendant At Home	Attendant Not Recorded	Total
Local	10.8	14.0	13.0	13.8
General	53.8	59.9	57.0	59.4
None	34.8	25.1	27.5	25.7
Not Recorded	0.6	1.0	2.6	1.1
TOTAL	100.0	100.0	100.0	100.0
Number	158	2,910	193	3,261

The procedures carried out on those with no attendant were examined (table 19)

TABLE 19

OPERATIONS PERFORMED ON PATIENTS WITH NO RECORDED ATTENDANT AT HOME
KIRKCALDY DAY BED UNIT : YEAR ENDING 31 MAY 1969

Operation	Number of Cases	Per Cent
Cystoscopy	25	15.9
ECT	30	19.0
Bowel Wash Out $\bar{c}$ X-ray	21	13.3
Urethral Catheter	16	10.1
Manipulation Joints and Fractures	15	9.5
Excision Cysts and Other Superficial Lesions	14	8.9
Other	37	23.4
TOTAL	158	100.0

The two commonest were ECT and cystoscopy and these were examined in greater detail.

ECT

There were 30 attendances for ECT (where there was no home support), but these were confined to eight patients. Two of these were aged 60 years or more. The consultants in charge of the cases supplied further information as follows -

Patient 1:

"This man had only three applications and was not at home when the ambulance called for him for a fourth treatment. At the time of treatment his wife had left him taking the children and he was living at home. The probability was that after defaulting from treatment he went to live with a sister".

Patient 2:

"Her husband was serving in the Royal Navy and she was on her own with a young baby. Attempts were made to persuade the Navy to allow her husband to be at home at least at the time when she was having treatment, but I gather these were not altogether successful".

Patient 3:

"A widow living on her own was considered more suitable for in-patient treatment but was adamant in her refusal to consider this".

Patient 4:

"A widow who lives on her own. Her daughter visits her at least two or three times a week and usually attends the clinic with the patient. She has two sisters nearby whom she visits frequently. Although

there is no specific reference in her notes, I imagine that she received a good deal of help when she was having electrical treatment".

Patient 5:

"A widower who has virtually no social contact and lives on his own".

Patient 6:

"A widow living on her own with parents and friends living near at hand and giving help when required".

It is clear that any after-effect either from the anaesthesia or directly as a result of the ECT would have been difficult to manage as a result of the domestic situation in several of these patients.

Cystoscopy

Of the 25 patients (with no home support) who received cystoscopy none had more than one treatment during the year studied, although six were known to have had similar treatment previously. 21 were aged 60 years or more.

Further information was gained from a questionnaire sent to the patients. The questionnaire was basically similar to that given to day bed unit patients in the Follow-up Survey. This part of the Study was conducted 12 months after the patients had received their treatment in the day bed unit. By this time five patients had died or left the area. Three did not reply.

Of the 17 patients who completed the questionnaire 16 had minor after-effects mainly related to the urinary tract eg dysuria: haematuria. Seven patients were worried at the time of occurrence,

of these symptoms. The comments of some of the patients are perhaps more eloquent at this point.

Patient 1: Widow aged 80 years

While in the unit, "I was just coming to myself when I was instructed to get my clothes on". She had dysuria and frequency of micturition which worried her sufficiently to contact her GP.

Patient 2: Widow aged 53 years

Complained a lot of pain on the way home, the journey taking $\frac{3}{4}$–1 hour. "I went by bus and after being done was very sore. I know I couldn't manage to walk that long road to get to the bus stop, so I asked the porter to get me an ambulance, which he did. As I live alone, my mum was 74 then. I got little help from her, whereas if I had been kept longer it would have made a difference to my home-coming".
On return home she was "very sore and tender" with back pain, pain passing urine and felt generally unwell.

Patient 3: Widow aged 65 years

Dizziness and tiredness after return home. Although she had no-one at home, there was a "very helpful neighbour next door".

Patient 4: Widow aged 75 years

Outside WC which was shared. She had pain and frequency in passing urine on return home.

Very grateful for the treatment received "for which I am truly thankful".

Patient 5: Widower aged 79 years

"No-one at home but I have a 'phone in the house".

It is clear that a proportion of patients with no-one at home and having ECT or cystoscopy as day patients were thereby in a stressful situation. This did not necessarily mean that they should not have been treated as day patients. It is likely that some patients who had ECT would have refused treatment unless it had been carried out as an out-patient procedure.

Finally, it should be noted that the patients identified as having no-one at home were those with no-one with them most of the time. In the Gynaecology Follow-up Survey patients were sought who had no attendant during the day only or during the night only (table 20).

TABLE 20

PRESENCE OF HOME ATTENDANT
GYNAECOLOGY FOLLOW-UP SURVEY

	Home Attendant Present All or Most of Time	Present During Day Only	Present During Night Only	No Attendant	No Answer	Total
Number of Patients	103	4	92	7	4	210
Per Cent	49.1	1.9	43.8	3.3	1.9	100

Almost half the patients were lacking a home attendant at some part of the day or night or all of the time following the return home. The majority of these patients fell into the group with no-one at home during the day. This was a younger group of patients than the one identified in the main survey. The problem here is the middle-aged woman with husband and family out all day and no-one available to give her supervisory care.

2. Role of the Family Doctor and the Hospital

Both forms of patient follow up were examined in the KDBU Follow-up Survey (table 21).

As many as 134 patients (41%) did not see and would not be seeing their family doctor after treatment while only 18 patients saw him either on the day of treatment or on the day after. The majority of patient/family doctor contacts made (93) occurred between the second day and one week after treatment.

TABLE 21

RETURN APPOINTMENT AT HOSPITAL AND CONTACT WITH FAMILY DOCTOR - KDBU FOLLOW-UP SURVEY

Return Appointment at Hospital

Contact with Family Doctor	No Appt Required	Within 1 week	Within 1-2 weeks	Within 3-4 weeks	Over 4 weeks	No Ans/ Other	Total
Did not/ will not see GP	22	17	17	15	57	6	134
Same Day	2	1	-	1	-	-	4
Day After	3	2	5	-	4	-	14
2 days - 1 wk	36	9	9	4	30	5	93
Between 1-2 wks	13	2	4	5	10	2	36
More than 2 weeks	4	3	4	-	7	4	22
No Answer	6	2	6	-	7	3	24
TOTAL	86	36	45	25	115	20	327

Consideration of hospital follow up showed that:- 86 patients (26.3%) had no follow up and the largest group, 115 (35.2%), were not seen at hospital for four weeks or more.

It is clear therefore that the hospital does not see its role as providing supervision in the immediate post-treatment phases for the majority of the patients.

Considering both forms of aftercare, family doctor and hospital, together - Table (21) shows that 22 patients had not and would not be seeing their family doctor and in addition would not be seen at hospital again.

57 patients (17.4%) had not and would not be seeing their family doctor and yet it would be at least four weeks or more after treatment before they were seen by a hospital doctor, while there was a period of at least two weeks following treatment before seven patients, who were not scheduled to return for hospital check for at least another two weeks, were seen by their family doctor.

The time of follow up is now examined in relation to three of the procedures carried out. Between them they accounted for 192 patients.

Of the 68 patients in the D & C/C group three had not and would not be seeing their family doctor or attending hospital for follow-up while 32 had not and would not be contacting their family doctor and would not attend hospital until four weeks or more after treatment.

Of the 74 patients having cystoscopy, 14 had not and would not be seeing their GP and would not attend hospital for at least four weeks. Twenty seven cystoscopy patients were not scheduled to return to hospital, five of these had not seen and would not be seeing their GP.

The follow up of patients investigated by BWO with X-ray was more satisfactory; although 15 patients had no contact with their own doctor, all were seen at hospital within four weeks of the treatment. There were four patients not due for hospital follow up for at least four weeks from the date of treatment but all four were seen by the GP within two weeks of treatment.

In the Gynaecology Follow-up Survey it was found that 63.3% of patients never saw their GP following treatment. Since only 20.0% were known to have a follow up appointment within six weeks following the date of operation it follows that many patients had no medical supervision during the six weeks following operation. A further 55.2% had a hospital check-up appointment in the six to sixteen weeks period following treatment. There was no record concerning the remaining 24.8% but it is the practice normally for the hospital to see patients six weeks after treatment. Presumably many patients therefore had to wait until this hospital check-up before receiving information concerning treatment, a pattern similar to that following gynaecology procedures in the Kirkcaldy Unit.

3. Role of the District Nurse (KDBU Follow-up Survey)

The district nurse service visited twelve patients in the post treatment period. One patient was visited on the day of hospital treatment, three on the day after treatment, seven between two days and one week after treatment and one between one and two weeks after treatment.

The district nurse service is not routinely informed of the discharge of patients by the hospital and this accounts for the small number of visits.

4. Domestic Difficulties

There were 14 patients (4.3%) who had difficulty in domestic arrangements arising from their treatment in the Kirkcaldy Day Bed Unit. Two of these patients described their difficulties as severe. (In the Gynaecology Follow-up Survey 10% had difficulty in domestic arrangements).

Patients who had the D & C/C group of operations were the highest numerically - six patients. Both of the patients who had serious difficulty were orthopaedic cases involving in one the application of a splint and the other a tendon operation. The difficulty experienced by these patients would almost certainly be related to the physical handicap in carrying out domestic duties.

Twelve of the patients with difficulty were female. All were under 65 years and nine were less than 45 years which is when domestic commitments tend to be greatest. This is corroborated by the finding that nine of the patients with difficulty had children at home. Of these, three had one child, three had two children and three had three children.

The patients described their reasons for domestic difficulties as follows:-

illness	-	3 patients
immobilisation	-	2 patients
husband had to live elsewhere	-	2 patients
husband had to stay off work	-	2 patients
other	-	5 patients

5. Return to Domestic Duties (KDBU Follow-up Survey)

The return to domestic duties is clearly of relevance in relation to female patients and also to patients who have had the more severe type of procedure carried out in which general anaesthesia has been used.

The first group considered therefore is that of females who have received treatment which required general anaesthesia. Their time of return to domestic duties is shown in Table 22.

TABLE 22

FEMALE PATIENTS HAVING GENERAL ANAESTHESIA :
TIME OF RETURN TO DOMESTIC DUTIES - KDBU FOLLOW-UP SURVEY

	Same Day	Day after Treatment	2 Days after Treatment	3-6 Days after Treatment	1 Week or More	Total
Number of Patients	24	41	18	9	4	96
Per Cent	25.0	42.7	18.8	9.4	4.2	100.0

Not included - 5 patients not returned to domestic duties at time of returning questionnaire

8 patients where domestic duties "not applicable"

13 patients - not answered

While it may be reasonable following some types of procedure for 41 patients to carry out some domestic duties on the day after treatment it is almost certainly unreasonable for 24 patients or one in five of all female patients treated under general anaesthesia, to be carrying out domestic duties on the same day as the treatment was performed.

This illustrates the need to provide some help for the married day bed patient to run the home and perhaps look after the family. The

question as to whether the presence of children made these women take up house work at an early stage was examined, but the evidence was inconclusive.

The time of return to domestic duties following specific operations viz D & C/C and cystoscopy was examined.

TABLE 23

TIME OF RETURN TO DOMESTIC DUTIES OF FEMALE PATIENTS FOLLOWING D & C/C AND CYSTOSCOPY - KDBU FOLLOW-UP SURVEY

		Same Day	Day After	2 Days After	3-6 Days After	1 Week or More	Total
D & C/C	Number	10	21	16	8	2	57
	Per Cent	17.5	36.8	28.1	14.0	3.5	100.0
Cystoscopy	Number	12	17	2	1	-	32
	Per Cent	37.5	53.1	6.3	3.1	-	100.0

Not included - 1 D & C/C patient not returned to domestic duties at time of returning questionnaire

8 D & C/C patients - not answered

4 cystoscopy patients - not answered

Following D & C/C 10 patients (17.5%) actually carried out domestic duties after the operation on the same day and 21 (36.8%) on the day after. It is surely reasonable for a woman to spend one day in bed following this operation and it can only be concluded that support in the home has been inadequate for these patients at the time of their operation.

In the case of cystoscopy 12 carried out domestic duties on the same day as the operation on returning home. Again it would seem reasonable for patients who had a cystoscopy under general anaesthesia to spend the rest of the day in bed.

6. Return to Work

TABLE 24

TIME OF RETURN TO WORK AFTER DAY BED TREATMENT OF PERSONS IN PAID EMPLOYMENT - KDBU FOLLOW-UP SURVEY

Time of Return to Work	Male		Female		Total	
	No	%	No	%	No	%
Returned same day	18	23.7	4	7.3	22	16.8
" day after treatment	38	50.0	21	38.2	59	45.0
" 2 days after treatment	8	10.5	8	14.6	16	12.2
" 3-6 days after treatment	2	2.6	11	20.0	13	9.9
" 1-2 weeks after treatment	7	9.2	7	12.7	14	10.7
" more than 2 weeks after treatment	2	2.6	4	7.3	6	4.6
Treated Friday; Returned Monday after Weekend	1	1.3	-	-	1	0.8
Total Patients	76	100.0	55	100.0	131	100.0

Not included: 20 male and 10 female patients not returned to work at time of returning questionnaire

7 male and 6 female patients - not answered

Eighteen of the men treated (23.7%) and four of the women (7.3%) returned to work on the same day as treatment was carried out. Of the men, six had excision of a superficial cyst, four a cystoscopy, two urethral bouginage, one bowel wash out with X-ray, one avulsion of a nail, three gastric test meal, one sigmoidoscopy. The only procedure for which a general anaesthetic was given was cystoscopy.

Of the 38 men (50.0%) who returned to work on the day after treatment the main groups were excision of cyst (6), cystoscopy (13) and bouginage (3), bowel wash out with X-ray, (9). It is unlikely that any of these men would be adversely affected by returning to work on the day after treatment.

Of the four women who went to work immediately after treatment one had a D & C/C; one a cystoscopy, and two a bowel wash out with X-ray, while of the 21 women who went to work on the day after treatment, the largest groups were cystoscopy with six patients, D & C/C with six patients, bowel wash out X-ray with four patients, and excision of cyst with two patients.

The patients who clearly returned to work prematurely were those in the D & C/C group. The woman who returned to work on the same day as she had cystoscopy would also clearly have benefited from more rest.

It is worth considering the D & C/C group in detail (table 25).

TABLE 25

TIME OF RETURN TO WORK OF PERSONS IN PAID EMPLOYMENT FOLLOWING D & C/CAUTERY OF CERVIX - KDBU FOLLOW-UP SURVEY

Returned same day	1
" day after	6
" 2 days after	4
" 3-6 days after	7
" 1-2 weeks after	6
" more than 2 weeks after	3
Total in paid employment	30

Not included: 2 patients not returned to work at time of returning questionnaire

1 Patient - not answered

Eighteen patients (60%) in paid employment who had an operation in the D & C/C group were back at work within one week. 11 patients (36.7%) were back within two days of the operation. There is therefore a general trend for women having these operations to return to work very early.

7. Amenities in the Home (KDBU Follow-up Survey)

The suitability of day bed treatment will depend to some extent on the quality of amenities in the home. Enquiry was therefore made into

1. bathing facilities
2. WC facilities

Of 327 patients completing the KDBU questionnaire it was found that 28 had no bath in the home and a further 14 shared a bath with another household.

The two main procedures in this survey were cystoscopy with 74 patients and D & C/C with 68 patients. Of the cystoscopies, six had no bath and two were shared (two not recorded) and of those having D & C/C eight had no bath (none shared: two not recorded). It is reasonable to assume that those patients who had an operation in the D & C/C group and who possessed no bath at home are unsuitable for DB care.

The patients' WC facilities were recorded. Twenty patients shared WC facilities with another household. Five of these patients had a cystoscopy with or without fulguration of a bladder lesion and one patient had urethral bouginage. Two of the group had a D & C/C while three had a bowel wash out with X-ray.

In the Gynaecology Follow-up Survey a similar result was shown with 3% of the patients sharing WC facilities with another household. It was also shown that 10% were without a bath in the home and a further 2.4% shared with another household. Since the majority of these patients had operations of the type D & C/cautery or hysterosalpingogram they would require good sanitary facilities in the immediate post-operative period.

vi. The Journey To and From the Day Bed Unit

The transport of patients is important in day bed unit care firstly with regard to the welfare of the patient, bearing in mind that many will require to travel home within a short period of receiving general anaesthesia, and secondly with regard to the functioning of the unit, bearing in mind that punctuality in arrival at and departure from the unit is essential for its smooth running.

In this section, the following topics are considered:-

- method of travel
- discomfort on the journey home
- punctuality in arrival and in leaving the unit
- patients dependent on ambulance services

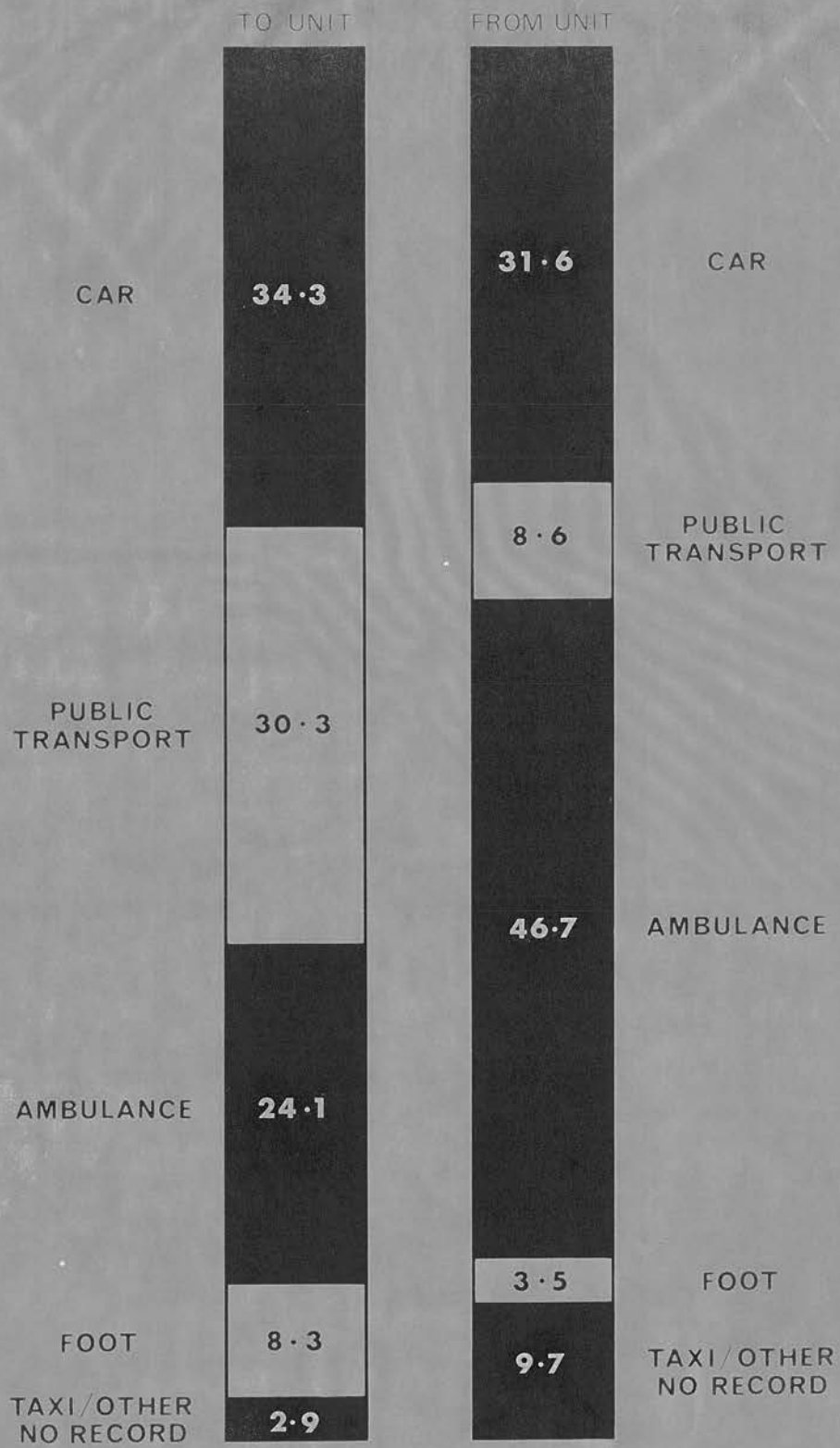
How Did Patients Travel? (Fig 3)

In travelling to the unit one-third of patients came by car, one-third by public transport and a quarter by ambulance. In travelling home one-third went by car, one-tenth by public transport and just under a half by ambulance. The increased need for ambulances for the homeward journey suggests that this form of day bed care, although dealing with "minor" cases, leaves many patients debilitated. Comparing the journey to the unit and the journey from the unit, the largest change in method of travel occurred mainly in two groups as follows:-

Of the 271 patients who went on foot to the unit 112 returned home by ambulance. In the second group, of 989 patients who went by public transport to the unit 505 returned by ambulance.

FIGURE 3

PERCENTAGE DISTRIBUTION OF METHODS OF TRAVEL TO AND FROM KIRKCALDY DAY BED UNIT: YEAR ENDING 31 MAY 1969



1. How Did Patients Travel Home in Relation to Distance?

TABLE 26

METHOD OF TRANSPORT FROM KDBU BY PLACE OF RESIDENCE : PERCENTAGE DISTRIBUTION : YEAR ENDING 31 MAY 1969

Method of Transport Home	Resident in Kirkcaldy(1)	Resident Outside Kirkcaldy(2)
Foot	9.9	0.7
Car	25.8	34.1
Public Transport	8.1	8.7
Taxi	1.7	0.1
Ambulance	43.9	47.9
Other	2.4	2.3
Not Recorded	8.3	6.1
Total	100.0	100.0
Number of Discharges	971	2,290

(1) Less than 2 miles (approx)

(2) 2 miles or more (approx)

The method of travel home by patients living close at hand to the hospital (less than 2 miles) and those living at a distance (more than 2 miles) were broadly similar (table 26). As expected, there was a drop in the proportion of patients living at a distance travelling home on foot - 0.7% compared with 9.9% of local patients and an increased use of the private car - 34.1% compared with 25.8%.

Thirteen patients who were given general anaesthesia walked home and 23 went home by public transport. Two of those who walked and 16 who travelled on public transport lived outside Kirkcaldy. These patients clearly should have travelled home by other means such as car, taxi or ambulance.

2. How Did Patients Travel Home Following Particular Procedures

TABLE 27

METHOD OF TRAVEL HOME BY PROCEDURES CARRIED OUT - KDBU FOLLOW-UP SURVEY

Method of Transport Home	Procedures												Total	
	D & C/C		Cystoscopy		BWO and X-ray		Excn Cysts		Injection Varicose Veins		Remaining Procedures			
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Foot	-	-	-	-	1	2.0	7	23.3	-	-	7	7.4	15	4.6
Car	51	75.0	24	32.4	23	46.0	15	50.0	5	55.6	31	32.6	149	45.7
Taxi	5	7.4	2	2.7	-	-	-	-	-	-	4	4.2	11	3.4
PT	-	-	1	1.4	20	40.0	6	20.0	4	44.4	2	2.1	33	10.1
Amb	12	17.7	47	63.5	6	12.0	2	6.7	-	-	51	53.7	118	36.2
Total	68	100.0	74	100.0	50	100.0	30	100.0	9	100.0	95	100.0	326	100.0

Method of transport not recorded for one patient (injection of varicose veins)

Following D & C/C and cystoscopy in both of which general anaesthesia was used, all of the patients with one exception travelled home by car, taxi or ambulance. Following bowel wash out and X-ray 40% went home by public transport. Of the two patients under "remaining procedures" travelling by public transport one had wound treatment and the other a gastric test meal, while of the seven patients in this category who walked home four had a gastric test meal, one a sigmoidoscopy, one wound treatment and one treatment of hydrocoele.

What Was the Duration of the Journey Home? (KDBU Follow-up Survey)

The duration of the journey home varied considerably between the different methods of transport employed. Over 90% of patients

travelling on foot or by taxi and more than three-quarters of those using a private car were home within 30 minutes. However, two-thirds of those travelling by public transport and 44.8% travelling by ambulance took longer than 30 minutes.

TABLE 28

DURATION OF JOURNEY HOME ACCORDING TO METHOD OF TRAVEL
KDBU FOLLOW-UP SURVEY

Duration of Journey Home	Foot		Car		Taxi		PT		Amb		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
0-29 mins	14	93.3	115	77.2	10	100.0	11	33.3	64	55.2	214	66.3
30-44 mins	-	-	28	18.8	-	-	9	27.3	31	26.7	68	21.1
45 mins +	1	6.7	6	4.0	-	-	13	39.4	21	18.1	41	12.7
Total	15	100.0	149	100.0	10	100.0	33	100.0	116	100.0	323	100.0

Duration of Journey Home not recorded in 1 patient travelling by taxi and 2 by ambulance

Method of Transport not recorded in 1 patient

The importance of method of travel home and duration of the journey was emphasised in the results of the Gynaecology Follow-up Survey. Patients were normally asked to provide their own transport. In fact, 77.6% of patients in the survey travelled home by car or taxi. However, 41 patients (19.5%) went home by public transport and five patients (2.4%) actually walked home. All had received a general anaesthetic. Of the five who went home on foot, three took less than half an hour to reach home, one gave no information about transport, but one patient took between $\frac{1}{2}$-$\frac{3}{4}$ hour to reach home and

she had received an operation of the D & C/C type. Finally, of thirteen patients taking $\frac{1}{2}$–$\frac{3}{4}$ hour to reach home on public transport, twelve had received a D & C/C operation or a hysterosalpingogram.

How Many Patients Had Discomfort on the Way Home?

108 patients (33.0%) had discomfort on the journey home following treatment of whom 11 (3.4%) described the discomfort as severe. (312 had no discomfort: 6 not recorded).

Similar results were found in the Gynaecology Follow-up Survey in which 42.9% of the patients had discomfort on the way home, 5.2% describing the discomfort as severe.

The discomfort following particular procedures was examined in the KDBU Follow-up Survey.

Just under one half of the patients (33 patients) having D & C/C had discomfort of whom three described the discomfort as severe while 23 patients (31.1%) having cystoscopy had discomfort of whom over 5% had severe discomfort. In procedures where no anaesthesia or local anaesthesia was employed, discomfort was also experienced. Following BWO with X-ray, 15 patients (30.0%); following excision of cysts, 11 patients (36.7%); and following injection of varicose veins six patients (60.0%) had discomfort.

i. Was Discomfort Related to the Method of Travel Home?

Discomfort following three procedures, D & C/C cystoscopy and bowel wash out with X-ray was now examined in relation to the method of transport home.

TABLE 29

DISCOMFORT ON THE JOURNEY HOME FOLLOWING D & C/C: CYSTOSCOPY: BWO AND X-RAY BY METHOD OF TRAVEL - KDBU FOLLOW-UP SURVEY

	D & C/C		Cystoscopy		Bowel Wash-out with X-ray	
Method of Transport Home	Discomfort		Discomfort		Discomfort	
	Present	Absent	Present	Absent	Present	Absent
Car/Taxi	25	30	10	14	5	18
Ambulance	8	4	12	34	3	3
Public Transport	-	-	1	-	7	13
Foot	-	-	-	-	-	1
Total	33	34	23	48	15	35

Discomfort not recorded - Cystoscopy - 1 patient travelling by taxi
- 1 patient travelling by ambulance
- 1 patient travelling by car

D & C/C - 1 patient travelling by taxi

Patients had discomfort with all of the main methods of travel. A high proportion of patients treated by D & C/C travelling by ambulance had discomfort, but D & C/C patients travelling by ambulance may have been a more debilitated group and may have been sent home by this means for this reason. This would only reinforce the argument that ambulance travel for these patients should be made as efficient as possible. The system of sending some patients home by public transport, who were recently treated by bowel wash out and X-ray, clearly requires to be kept under review in view of the number who had discomfort.

ii. What Was the Relation Between Discomfort and Duration of Journey Home?

The number of patients with discomfort on the journey home was not significantly higher in those making longer journeys. After cystoscopy and BWO with X-ray a higher proportion of patients had discomfort in those taking longer, but the difference was not statistically significant (Table 30).

TABLE 30

DISCOMFORT DURING JOURNEY HOME IN PATIENTS TREATED BY CYSTOSCOPY AND BOWEL WASH OUT WITH X-RAY BY DURATION OF JOURNEY

	Duration of Journey Home					
	Cystoscopy			BWO with X-ray		
	Less than ½ hr	½ hr or more	No Answer	Less than ½ hr	½ hr or more	No Answer
Discomfort on Journey Home						
Present	12	11	-	7	8	-
Not Present	31	15	2	24	11	-
No Answer	1	1	1	-	-	-
Total Patients	44	27	3	31	19	-

Of the ten cystoscopy patients who complained of discomfort travelling home by ambulance three stated they took 30 to 45 minutes to reach home and one took 45 minutes or more. Yet the former three patients lived within five miles of the hospital and the latter within 15 miles. The most likely explanation is that either the patients' homes were not easily accessible or the ambulances were diverted to drop or pick up other patients on the way.

iii. How Many Desired a Longer Recovery Period in Hospital?

There were 28 patients who wished for a longer period in hospital. Ten of these had an operation in the D & C/C group. Thus one patient in seven, approximately, who had the operation wished to stay longer in hospital - perhaps a measure of the debilitating effect of the procedure. Four cystoscopy patients, 5.4% of patients having the procedure, wished to remain longer. Three of the six patients having lumbar punctures wished for a longer stay although it is known from Table (32) that these patients normally spend several hours recovering in hospital before being sent home. Finally five patients who had an excision of a superficial cyst and three who had bowel wash out and X-ray expressed a wish to stay longer.

Nineteen of the 28 patients (67.9%) who wished to stay longer complained of discomfort on the journey home. Amongst the 292 patients who did not wish to stay longer only 88 (30.1%) had discomfort. In the Gynaecology Follow-up Survey there was a broadly similar trend. (Appendix XIV)

Punctuality

Since there are two main treatment sessions on the average each day, it is essential that patients arrive at the appointed time and are not delayed in leaving the unit.

TABLE 31

PUNCTUALITY OF PATIENTS IN ARRIVING AT THE KIRKCALDY DAY BED UNIT, BY MAIN METHODS OF TRAVEL AND PLACE OF RESIDENCE: PERCENTAGE DISTRIBUTION: YEAR ENDING 31 MAY 1969

Main Methods of Travel	Foot		Private Car		Public Transport		Ambulance	
Place of Residence	In Kirkcaldy (1)	Outside Kirkcaldy (2)	In Kirkcaldy (1)	Outside Kirkcaldy (2)	In Kirkcaldy (1)	Outside Kirkcaldy (2)	In Kirkcaldy (1)	Outside Kirkcaldy (2)
Punctuality								
Early or on time	84.4	72.7	80.4	80.1	90.1	82.8	44.0	53.9
1 - 10 Mins Late	8.0	12.1	8.2	8.6	3.8	5.0	5.2	11.1
10 Mins -	4.0	9.1	6.5	7.9	4.6	7.6	26.7	16.3
30 Mins -	2.7	3.0	2.5	2.4	1.2	2.7	17.2	10.1
1 hour -	0.9	3.0	2.5	1.0	0.4	1.9	6.9	8.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of Patient Attendances	225	33	245	793	262	699	116	566
Number not Recorded (excluded from percentage calculations)	14	-	28	52	10	18	25	80

Other method of travel: Taxi 33 patients

Miscellaneous 23 patients

No Record 38 patients

(1) Less than 2 miles approx

(2) 2 miles or more approx

The majority of patients travelling on foot, by private car and by public transport arrived on time or at most 10 minutes late and this applied whether the patients lived locally or at a distance. However, in the case of ambulance travel considerable delay occurred. Only 49.2% of patients living locally and 65.0% living at a distance arrived on time or up to 10 minutes late. Twenty-eight patients (24.1%) living locally and 106 (18.8%) patients living at a distance arrived over 30 minutes late and of these, eight patients living locally and 49 living at a distance were over one hour late. These delays clearly must have affected the efficient running of the Unit.

Leaving the Unit

Examination of this factor is confined to measuring the duration of time patients spent waiting for the ambulance to take them home. This period was calculated from the time of requesting the ambulance by the receptionist to its time of arrival at the Unit.

It was found that within 30 minutes of the request being made, 45.1% of patients had been uplifted. At the end of one hour, this percentage had risen to 73.5%. However, 17.5% of the total number of patients waited between one and two hours and 1.6% waited more than two hours, (7.5% of the total number not known). This delay does not necessarily imply criticism of the ambulance service. The ambulance service is organised to move ill people to hospital as quickly as possible; in day bed care a novel situation has arisen, in which patients recently recovered from treatment and who are likely to be under some stress need to be transported efficiently from hospital to home.

However, it is possible that adjustment of the system within the day bed unit itself might provide at least a partial solution. The area ambulance department had indicated that an improved service could be given if longer notice of ambulance requirements were received. The mean duration of time spent in the Unit by different types of case in the day bed unit is known (Table 32). Using this information and together with previous experience of similar cases the Unit sister should be able to give early notice of ambulance requirements to the ambulance officer.

TABLE 32

DURATION OF STAY BY PROCEDURE IN THE DAY BED UNIT, KIRKCALDY

YEAR ENDING 31 MAY 1969

Procedure	Total (Excl no Record)	Mean Stay (Hours)	Median Stay (Hours)	Max Stay (Hours)
Observation	59	2.28	1.85	8.5
Lumbar Puncture	62	5.24	5.13	8.5
Change of Plaster	58	3.64	3.43	7.5
Bowel Wash-Out (X-ray)	233	3.45	3.45	5.5
Sigmoidoscopy	33	1.59	1.42	4.5
Manipulation of Nose	43	3.18	3.26	6.5
Proof Puncture Sinus	118	3.21	3.06	5.5
Cystoscopy	400	3.39	3.46	7.5
Bouginage (urethra)	80	3.28	3.38	6.5
Sternal Puncture	29	2.57	2.20	8.5
Injection of Varicose Veins	49	1.40	1.33	3.5
D & C/C	241	4.23	4.29	6.5
Minor Gynae Ops (other)	32	1.44	1.23	4.5
Minor Orthopaedic	61	3.89	3.77	8.5
Manipulation Joints	92	3.62	3.54	7.5
Reduction of Fractures	44	3.05	3.14	7.5
Tendon Operations	57	4.06	4.16	7.5
Superficial Cyst Excn	272	1.70	1.53	6.5
Other Superficial Lesion Excision	41	2.82	2.25	6.5
Nail Removal	49	2.23	2.21	6.5
Abscess Incision	71	2.81	2.72	6.5
Catheter Change	204	1.35	1.31	3.5
ECT	494	2.40	2.43	4.5
Wound Treatment	97	3.10	3.13	7.5
MHTM (Gastric T Meal)	173	3.48	3.51	4.5
Hydrocele Tap.	20	1.40	1.25	4.5
Injections	13	3.35	3.50	6.5
Minor Oral Procedures	59	2.75	2.82	6.5
Other	11	2.00	2.00	4.5
TOTAL	3,195			

Patients with stay not recorded were excluded from the calculations.
Four patients with a recorded stay of 10 hours or more were also excluded because of probable recording error.

Footnote: The full table with distribution of stay in the Unit is shown in Appendix IV.

Were Any Groups of Patients Dependent on Ambulance Services?

Patients who require ambulance services are generally likely to be in the more debilitated and non car owning groups of the population. One of these groups might be expected to be the elderly. This was strikingly confirmed in day bed patients when the age distribution of patients travelling to and from the unit by ambulance was examined. (Fig 4). This showed that with increasing age, dependence on the ambulance increased both for the journey to the unit and the journey home. In these circumstances one or more of the following factors might be operating:-

a. Treatment tended to have a more debilitating effect on older people than on the young.

b. Treatment for conditions arising in the elderly may be of a more debilitating nature and therefore demand on the ambulance service would be greater.

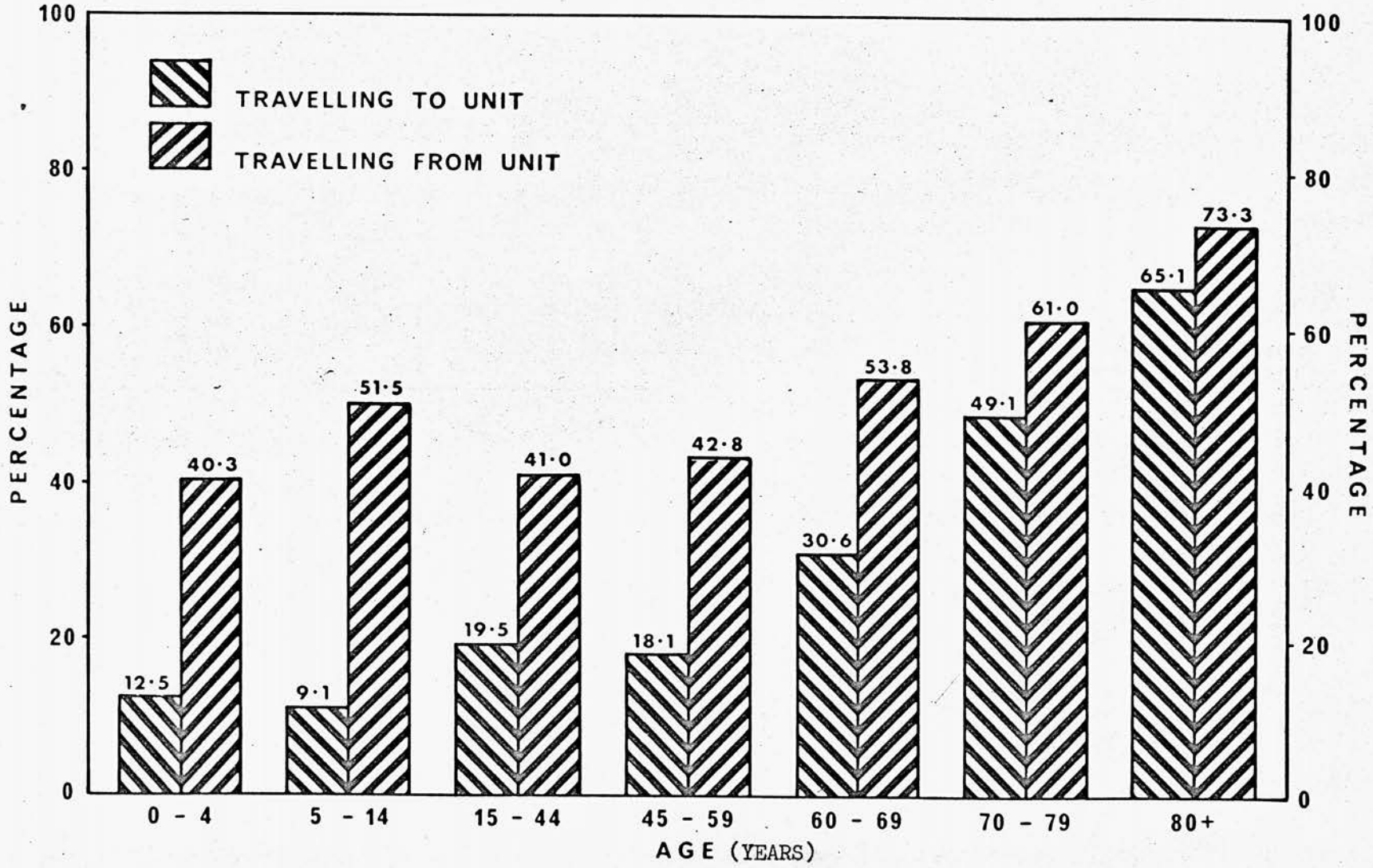
c. Fewer elderly people owned cars, and those elderly patients who did might not have had anyone available to drive them at the time of treatment.

d. Help from relatives, friends or neighbours might not have been forthcoming.

e. In general, the elderly are less mobile than the young.

The first two factors are unlikely for the following reasons - the considerably higher proportion of young people using the ambulance for the journey home tends to indicate that the young are just as debilitated. The proportion of general anaesthetics administered was

PERCENTAGE OF PATIENTS TRAVELLING TO AND FROM KIRKCALDY DAY BED UNIT BY AMBULANCE:
CLASSIFIED BY AGE: YEAR ENDING 31 MAY 1969



shown to decrease markedly with increasing age, implying that the treatment itself was unlikely to be of a more serious nature in the elderly than in younger age groups (Fig 2). The last three factors viz. c, d and e appear to be the more valid reasons.

CHAPTER II.4

THE DAY BED UNIT ORGANISATION AND ITS PROBLEMS

The following aspects of day bed unit organisation and facilities were examined.

I. The Role of the Clinician

II. The Day Bed Unit in Relation to Other Hospital Departments

III. The Use Made of Facilities and Services

Some of the difficulties which have arisen in the working of the unit and which could occur in other day bed units are discussed. These organisational difficulties are related to the role of clinical staff and to the role of the day bed unit in relation to the hospital departments.

I. The Role of the Clinician

The difficulties outlined are related to the extent to which clinicians feel they should be committed to the work of the unit including the supervision of junior staff.

a. The unit has no clinical staff of its own. Difficulty has sometimes occurred in obtaining clinical assistance to attend patients. This may be related in part at least to the physical separation between the unit and the in-patient wards, which are the main work area for clinical staff.

b. Difficulty in obtaining clinical opinion as to fitness for discharge may be due to the same reason and may account for the development of the custom whereby patients are often discharged from the unit by the sister.

This development may be partly due to the belief that the procedures are relatively minor and therefore safe. Although this may be true it should be noted that 58.2% of cases in the year surveyed received general anaesthesia and half of the patients between the ages of 60 and 79 received a general anaesthetic.

c. Difficulty in the supervision of junior surgeons by their seniors may have occurred if the latter were operating at the same time in theatres situated at some distance from the day bed unit theatre. This accounted for the practice whereby orthopaedic surgeons performed day operations in the main hospital theatres and transferred the patients to the day bed unit ward to recover.

d. A reluctance by some clinicians to conduct established day bed procedures in the day bed unit may be related to the physical inconvenience caused by leaving their normal place of work, eg it is known that out-patient sigmoidoscopy procedures were still being performed in the main operating theatre.

Some specialties clearly felt these difficulties more than others, possibly due to differences in their work pattern. The difficulties illustrate organisational complications which are probably inherent in a unit of this kind, and resolving them once the unit is established may be difficult. Possible solutions are discussed in Chapter 11.6.

II. The Day Bed Unit in Relation to Other Hospital Departments

The difficulties outlined here relate to the functional relationships between the day bed unit and other hospital departments.

The day bed unit is an organisation grafted on to the existing hospital organisation. This system of day bed care has some independence from that provided previously in in-patient and out-patient facilities. However, it still depends for many services on those of the main hospital. The success of the unit therefore will depend to some extent on how successfully it interacts with other hospital departments. Some of the operational difficulties which arose during the period studied appeared to be related to the Unit's semi-dependent role. Most were related to the degree of physical isolation or separation between the unit and that of other departments.

Medical Records Department

The unit has no administrative service of its own. Patients are sent for at the request of each specialty by the Records Department and inevitably breakdown of communications sometimes occurs. Moreover the system affords little central control over the flow of patients through the unit. This situation tends to be aggravated by the unit's multi-specialty nature as well as by its physical separation from the Records Department, and from each of the specialties using the unit.

The setting up of a separate Day Bed Unit administration might have helped requests for use of the unit being channelled through this department. The work could then be planned as a whole and not in the present fragmented way. The overall control of the administration could still be in the hands of the Group Records Officer. In this way deployment of administrative staff would be under central control.

An example where a completely separate system of control has been set up in the day bed unit independent of the principal organisation is

that of theatre supervision. This is the Combined Day Bed/Casualty Theatre suite which is controlled by the Casualty Sister, and is quite independent of the Main In-patient Theatre organisation. In this instance, separate control has not lent itself to ease of deployment of theatre staff between the main in-patient theatres and the Day Bed and Casualty Theatres. The arrangement might have been improved by giving overall general control, including deployment of staff between the various theatres, to the sister-in-charge of the Main Theatres, but primary responsibility to either the Day Bed Unit sister or the Casualty Sister.

Relationship of the Day Bed Unit to X-Ray and Laboratory Services

Although the hospital x-ray department is on the same floor as the Day Bed Unit the distance between the two is sufficiently great to require a nurse to accompany any of the day-bed patients who requires an x-ray, eg patients who have a bowel x-ray following enema in the Day Bed Unit. In an in-patient ward situation the assignment of a nurse to this duty would be taken as a matter of course. Such a duty in a Day Bed Unit however tends to occur in the middle of an operation or treatment session and the temporary loss of a nurse at this time can lead to nursing difficulties.

Close proximity of the X-ray department or in the case of a large day bed department an X-ray department within the unit itself, as in the Day Bed Unit at Stoke-on-Trent, would be a great advantage. No such difficulties arise in the case of pathology, bacteriology and biochemistry services. The types of procedures for which these services are most frequently required are shown in table 38. It may be reasonably assumed that the results of tests on these cases

are not usually immediately required. Specimens can therefore be taken to the laboratory at the end of a session with relatively little inconvenience to the staff.

III. The Facilities

1. General Considerations

The system of three bays each containing six beds has proved satisfactory in use. There is sufficient privacy to allow patients of both sexes to occupy adjoining bays and yet beds can be kept under effective surveillance by the nursing staff at all times. The observation of patients is of such key importance in a unit of this type that an open plan type of ward is to be preferred.

Since a large number of patients arrive and leave the unit during a short period of time the importance of good changing and clothes storage facilities for patients cannot be overemphasised. Since there is only one changing room with lockers at Kirkcaldy there has been difficulty when male and female patients have been treated at the same time. It seems reasonable to recommend male and female changing rooms with sanitary facilities and lockable clothes hanging space for the maximum number of patients. Thus in an 18 bed unit, 18 male and 18 female lockers would be required.

The waiting/rest room has proved to be a key area. The number of patients using this room at any time depends on a number of factors eg the efficiency of transport facilities; the nature of the operation. From observations made of the room in use, it is concluded that the waiting/rest room in any DBU should be sufficiently large to hold 2/3 of the maximum number of patients in a session. They should be

able to sit comfortably since many will have recently received a general anaesthetic. For this reason chairs with arms should be provided. It will be shown that a number of the chairs should be of the geriatric type in view of the number of old people treated. In addition there should be sufficient room for a receptionist/nurse station. Male and female patient sanitary facilities serving this area are essential.

In considering the total number of sanitary facilities required for patients, due regard should be paid to the fact that many of the patients in each of the day bed units examined were suffering from urinary complaints.

2. The Use Made of Facilities and Services

The use made of particular facilities and services was examined as follows -

i. Beds — Bed Occupancy; Use Made of the Day Bed; Prediction of Turnover

ii. Place of Treatment

iii. Anaesthesia

iv. X-ray Facilities

v. Catering Services

vi. Laboratory Services

i. What Were the Bed Requirements?

Bed Occupancy

The working day may be regarded as consisting of two main working periods. The first is the morning period with the unit opening at 8 am and operation/investigation sessions beginning between 9 am

and 11 am. The second main period takes place in the afternoon beginning at 1.30 to 2 pm. There are nine main working periods each week* and 468 (approximately) in a year. With these figures therefore, it is possible to make an estimate of the bed occupancy.

Of the 18 beds available, the six bedded bay at the "casualty department end" of the ward tends to be reserved for accident and emergency patients and patients who take longer to recuperate from Day Bed Unit treatment than anticipated. Assuming 18 beds are available, the total available bed sessions in one year is 8,424. Of the 3,261 recorded cases treated in one year use was made of a bed in only 2,541 cases. Assuming each case occupied a bed for a bed session then the bed occupancy would be 30.2%. However, this percentage does not reflect the work involved in treating the 719 patients for whom a bed was not used. Had a bed been used in these cases the occupancy would have risen to 38.7%. However the unit would still appear to be underused.

A characteristic of the working of the unit is the marked fluctuation in the number of patients treated, even within the duration of one working day. For example, it is possible for the unit to be fully occupied in caring for 10 or 12 patients who require a GA in a morning session and in the afternoon session for only 2 or 3 patients to be treated. This pattern of work would be very unusual in any in-patient ward. Some of this fluctuation might be avoidable by greater control of the workload at Day Bed Unit level.

* Two Working Periods Daily: Five Day Week
One period weekly reserved for cleaning and maintenance.
The total figure of 468 will be reduced by public holidays.

A higher turnover might also cause certain difficulties. Successively heavy sessions tends to put pressure on nursing staff who have to clean and prepare the unit in the interval, in addition to looking after patients. Finally, a large number of patients having treatment or investigation may cause some difficulty in supervision and organisation of nursing care keeping in mind that groups of patients receiving different treatment or investigation would be treated simultaneously. Nevertheless, it is concluded that the unit could handle a greater number of patients. This could probably be achieved without increase of staff, allowing greater control over the planning of sessions within the unit itself.

The Use of the Day Bed

The first facility examined was that of the day bed itself. This was used primarily as a place to rest and prepare prior to certain forms of treatment particularly those in which a general anaesthetic was required and secondly as a place to recover after treatment. In addition it was used as a place of treatment for certain procedures (discussed later). The use made of the day bed is shown by specialty in table 33.

The number of patients recorded not making use of a day bed for any purpose was 719 (22.1% of the total procedures carried out). The main procedures in this category were excision of superficial cyst, nail and other lesions (252), change of urethral catheter (193) and injection of varicose veins (45).

When the pattern of procedures is examined in the other Day Bed Units it was apparent that they also treated a considerable number of

purely ambulant patients eg excision of superficial skin lesions: change of urethral catheter. It is possible that the provision of good operating and investigation facilities with provision for rest, if required, tends to encourage the treatment of ambulatory patients in Day Bed Units.

However, it is not only from the ambulant end of the out-patient spectrum that patients are drawn, the facilities clearly provide a convenient place of treatment in certain circumstances for in-patients. 63 in-patients were treated in the unit during the year studied. Examples of investigation carried out on these patients were sternal marrow puncture and lumbar puncture. The convenience of treating these patients in a unit organised for such procedures seemed to outweigh any disadvantage in transferring the patient to the unit for treatment and thence back to the in-patient ward.

On the whole, the use of such a unit as a flexible out-patient facility may be of general benefit provided patients who require the use of an out-patient bed suffer no inconvenience as a result.

TABLE 33

PERCENTAGE OF PATIENTS MAKING USE OF A BED, BY SPECIALTY: KIRKCALDY DAY BED UNIT THE YEAR ENDING 31 MAY 1969

	General Medicine	General Surgery	Orthopaedic Surgery	Urology	Gynaecology	Psychiatry	E.N.T.	Casualty	Other	Total
Bed Used	88.1	43.5	96.0	70.5	93.4	99.6	97.7	93.9	100.0	77.9
Bed Not Used	11.9	56.5	4.0	29.5	6.6	0.4	2.3	6.1	-	22.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	218	772	327	684	287	501	217	245	6	3257

NOTE: Use of bed not recorded in 1 case: Specialty not recorded in 3 cases.

Prediction of Turnover of Day Bed Unit Cases

A method of predicting case turnover would be of considerable value in planning future day bed units. However, knowledge concerning the number and type of minor procedures carried out in many hospitals is often scanty. A preliminary approximate estimate may be made from the case turnover experienced at Kirkcaldy Day Bed Unit.

By calculating the age specific rates for procedures or groups of closely related procedures carried out on patients derived from a known catchment population it should be possible to apply these rates to calculate the number of similar procedures in any population. The age specific rates of the 12 commonest procedures or groups of procedures carried out in KDBU during the year ending 31 May 1969 on all patients belonging to the defined catchment population, that of the large burgh of Kirkcaldy, were therefore calculated (Table 34)*0

Clearly it would be unwise to interpret the experience of one DBU too closely in planning the requirements of another. The population characteristics other than age, the social characteristics, attitudes to the method of day bed care may all vary. Indeed, the population used in the calculation may be atypical in at least two ways -

1. none of the population lived further than two miles from the hospital.

2. the population was entirely an urban one.

---

*0 Catchment Population. Patients were included who had an address in Kirkcaldy. It was assumed that few patients living within the catchment area had minor procedures performed in a hospital other than the Victoria Hospital, Kirkcaldy.

Allowance, moreover, has to be made for the fact that not all potential day bed cases were actually carried out in the DBU. This problem is examined later. It is assumed here that the number of these cases was small and should be covered by adding 10% to the estimated number of procedures arising within a population.

With these provisos it is believed that these rates applied to any population with a known age distribution would provide an approximate estimate of the number of such procedures likely to be performed on that population.

TABLE 34

SELECTED PROCEDURES ON PATIENTS RESIDENT IN KIRKCALDY CARRIED OUT AT KIRKCALDY DAY BED UNIT. YEAR ENDING 31 MAY 1969

Age Specific Rates per 1000 Population

Procedure	AGE-GROUP 0–44	45–	60–	70+	ALL AGES	Standard error
Lumbar Puncture	0.48	0.41	0.19	–	0.40	0.09
Bowel Wash-out and X-ray	0.35	2.84	4.41	3.61	1.61	0.18
Cystoscopy	1.00	3.44	7.66	6.11	2.57	0.23
Bouginage	0.03	0.41	2.68	3.06	0.62	0.11
D & C Cautery of Cervix	4.08	2.23	0.77	1.11	1.71	0.19
Manipulation of Bones & Joints	0.45	1.11	2.87	1.39	0.92	0.14
Operations on Tendons	0.51	0.61	0.19	0.28	0.48	0.10
Superficial Cysts	1.70	3.55	3.26	1.11	2.19	0.21
Treatment of Abscess	0.77	0.51	0.38	0.56	0.66	0.12
ECT	0.48	3.24	2.11	1.66	1.28	0.16
Treatment of Wounds	0.74	0.81	0.38	0.56	0.70	0.12
Gastric Test Meal	1.35	2.13	0.96	1.39	1.47	0.17
POPULATION OF KIRKCALDY 1966 SAMPLE CENSUS	31,130	9870	5220	3600	49,820	

The range for the all ages rate can be calculated (for 95% probability, the all ages rate $\pm$ 2.S.E.).

e.g. the range for cystoscopy is 2.11 - 3.03
for D & C/
Cautery of Cervix 1.33 - 2.09
for ECT, 0.96 - 1.60

ii. Where Was the Treatment Carried Out?

The place of treatment is given in table (35)

TABLE 35

PLACE OF TREATMENT BY SPECIALTY: PERCENTAGE DISTRIBUTION: KIRKCALDY DAY BED UNIT: YEAR ENDING 31 MAY 1969

Place of Treatment	General Medicine	General Surgery	Orthopaedic Surgery	Urology	Gynaecology	Psychiatry	ENT	Casualty	Other	Total Procedures	
										Number	%
Bed	53.2	18.7	1.3	0.9	0.7	4.2	0.5	8.6	50	318	9.8
Treatment Room	36.2	32.5	4.4	22.8	8.0	95.8	51.4	0.8	16.7	1270	39.1
Bed and Treatment Room	8.3	17.4	-	-	-	-	-	-	-	152	4.7
DBU Theatre	0.5	7.3	14.4	75.2	90.6	-	40.3	3.3	-	972	30.0
Casualty Theatre	-	1.4	7.8	0.2	-	-	-	79.9	-	232	7.2
In-patient Theatre	0.5	1.4	70.2	0.3	0.4	-	7.9	1.6	-	260	8.0
Casualty Department	-	-	0.3	-	-	-	-	5.3	-	14	0.4
Other Department	1.4	1.3	1.6	0.7	0.4	-	-	0.4	33.3	27	0.8
TOTAL PROCEDURES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
NUMBER	218	770	319	684	287	501	216	244	6	3245	100.0

NOTE: Place of treatment not recorded for 13 procedures carried out, 9 of which were Orthopaedic.

Specialty not recorded in 3 patients treated.

A high percentage of patients was treated in the treatment room (1,270 patients - 39.1%). Moreover, 9.8% of the patients were treated in bed and this percentage rose to 14.5% if patients receiving part of their treatment in bed and part in the treatment room were included. Thus a large number of patients were treated without the aid of an operating theatre in either treatment room alone; bed alone; or treatment room and bed together. In general medicine 97.7% came into this category; in general surgery 88.6: in ENT 51.9% in psychiatry 100%.

The majority of patients treated in bed and treatment room were those having gastric test meals, the gastric tube being inserted with the patient in the treatment room and the test samples taken while the patient remained in the day bed.

It is possible that some of the orthopaedic cases could have been treated in the treatment room eg change of plaster; remanipulations. The system of treating a large number of orthopaedic day patients in the in-patient theatre with subsequent transfer to the Day Bed Unit has tended to preclude the use of the treatment room as a place of treatment for these cases.

Day Bed Unit patients treated in an operating theatre accounted for 45.2% of the total cases treated. The specialties requiring operating theatre facilities were, orthopaedic surgery (92.4%); urology (75.7%); gynaecology (91.0%); and casualty (84.8%).

The use made of in-patient theatre facilities by day bed unit patients has been noted in a previous section. 260 procedures were carried out in this manner the greater number of which were orthopaedic. (70.2% of orthopaedic procedures were carried out thus). Possible changes in the organisation of orthopaedic operating sessions might allow orthopaedic cases to be conducted in the day bed unit. The changes are discussed in chapter II 6 P. 176.

iii. What Anaesthetic Facilities and Services Were Used?

In the year studied, 1,937 patients (59.4%) were treated under general anaesthesia: 845 (25.9%) had no anaesthetic and 449 (13.8%) had a local anaesthetic (In 30 cases, the method of anaesthesia was not recorded).

From the planning point of view the place of treatment and the type of anaesthetic administered is of particular interest.

TABLE 36

TYPE OF ANAESTHESIA AND PLACE OF TREATMENT IN KIRKCALDY DAY BED UNIT: PERCENTAGE DISTRIBUTION: YEAR ENDING 31 MAY 1969

Place of Treatment	Anaesthesia: General	Local	None	No Record	Total
NO RECORD	0.3	0	0.6	10.0	0.4
BED	1.3	2.2	32.1	40.0	9.8
TREATMENT ROOM	30.0	87.8	34.3	23.3	39.0
DAY BED THEATRE	46.0	6.2	6.3	0	29.8
CASUALTY DEPARTMENT	0.4	0.2	0.7	-	0.4
CASUALTY THEATRE	10.9	0.7	1.7	13.3	7.1
IN-PATIENT THEATRE	11.1	2.5	3.7	13.3	8.0
OTHER	0.1	0.5	2.7	0.0	0.8
BED & TREATMENT ROOM (COMBINED)	0.0	0.0	18.0	0.0	4.7
TOTAL	100.0	100.0	100.0	100.0	100.0
NUMBER OF OPERATIONS	1937	449	845	30	3261

As expected, the highest proportion of general anaesthetics was given in operating theatres (68.0%) but 581 (30.0%) were given in the treatment room illustrating the use made of this particular facility. 26 were actually given in the day beds. These were patients having ECT for whom the duration of anaesthesia is usually short and to whom no combustible anaesthetic gases are usually given. The beds, which may be tipped into the Trendelenberg position, are equipped with detachable head and end boards and are therefore suitable for the administration of general anaesthesia. The practice of giving ECT in bed was eventually discarded since it was found equally convenient to transfer the patient to the treatment room for the procedure to be carried out. Anaesthesia for other procedures did involve the use of combustible gases and for these the operating theatre was used.

In the case of local anaesthesia, the treatment room was clearly the place of choice with 394 cases (87.8%) conducted there. Although 42 procedures (9.4%) required only a local anaesthetic it was decided that full theatre facilities were required for these patients. Ninety eight patients who had no anaesthetic also required full theatre facilities. The types of procedure where no anaesthetic was required at all were investigations such as gastric test meal and preparation for investigation such as bowel wash-out preparatory to bowel X-ray.

It may be concluded that the giving of full general anaesthesia including the use of combustible anaesthetic gases in current day

bed unit practice necessitates the provision of full operating theatre facilities. At the same time the use made of the treatment room at Kirkcaldy underlines the need for this additional facility.

iv. What Use Was Made of X-Ray Facilities?

X-ray examination was performed on 536 patients treated during the year examined. (22 not recorded).

It was not always easy for every x-ray to be recorded on patients treated in another department outwith the unit. This applied especially to the orthopaedic department where only 40 were recorded (Table 37). The figure of 536 is therefore likely to be an underestimate since a high proportion of patients treated in this specialty would be expected to have an x-ray performed. Nevertheless it does indicate that considerable use of x-rays was made especially in general surgery cases in whom 38.0% were x-rayed, general medicine 43.1% and casualty 32.4%. X-ray facilities are therefore essential for the types of day bed case handled by the specialties in this Unit.

TABLE 37

NUMBER OF ATTENDANCES AT WHICH X-RAY WAS REQUIRED; PERCENTAGE DISTRIBUTION BY SPECIALTY: YEAR ENDING 31 MAY 1969

	SPECIALTY									
	Gen Medicine	Gen Surgery	Orthop	Urol	Gynaec	Psych	ENT	CAS	Other	Total
Not X-Rayed	56.9	62.0	87.4	95.8	99.7	100.0	99.5	67.6	100.0	83.5
X-Rayed	43.1	38.0	12.6	4.3	0.4	-	0.5	32.4	-	16.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of Patients Attending	218	768	318	682	287	501	216	241	6	3237

Not recorded - Specialty 3 Patient Attendances.
- Whether X-Rayed 21 Patient Attendances.
(4 general surgery
10 orthopaedic
2 urology
1 ENT
4 casualty)

v. Were Catering Facilities Necessary?

The number of patients who require main meals is of some importance in the planning of a day bed unit - in the facilities which should be provided in the unit itself and in its siting in relation to the main hospital catering facilities.

During the year ending 31 May 1969 only 26 main meals were served. 3235 thus had no main meal (no record - 2 cases).

A large number of patients were served with light refreshment by the hospital during the course of their stay.

Of those patients who had a meal, 13 were being investigated by lumbar puncture and five by bowel wash-out prior to barium enema. The remainder were distributed amongst six other types of investigation or treatment. There is therefore no need for a Day Bed Unit conducting this pattern of case to possess or to be situated near catering facilities other than those capable of serving light refreshment. This fact would be of some importance if a day unit were to be established independent of any hospital, for example as part of a large health centre.

vi. What Use Was Made of Laboratory Services?

The total number of specimens sent from the Day Bed Unit during the 6 month period ending 15.1.69 for laboratory examination was 336, (Table 38), giving a rate of 21.0 per 100 patients treated. (Number of patients treated approximately 1600). The largest number of specimens was sent to biochemistry followed by bacteriology and pathology. Haematology examination was required in only a relatively small number of cases.

It was found possible to group all the cases involved into seven operation/investigation groups as shown in Table 38. Biochemistry requests originated from two groups only - gastric test meal and lumbar puncture, while bacteriology requests originated from three groups - lumbar puncture, CSU/MSU and incision of abscess/sinus etc. Requests for pathology examination were restricted to three groups - CSU/MSU, biopsy of cervix and uterus. Haematology examination was only required in one type of case, that of sternal marrow puncture.

It should be noted that biopsy of cervix and uterus were not conducted to any extent until November 1968 when the unit came into full use for gynaecology cases. These operations were therefore only carried out for $2\frac{1}{2}$ months during the six month period of this particular study.

TABLE 38

LABORATORY INVESTIGATIONS AT KIRKCALDY DAY BED UNIT DURING 6-MONTH PERIOD ENDING 15.1.69

Procedure	TYPE OF LABORATORY INVESTIGATION				TOTAL
	Biochemistry	Bacteriology	Haematology	Pathology	
Maximum Histamine Test Meal	97				97
Lumbar Puncture	45	45			90
Sternal Marrow Puncture			12		12
Excision Cysts/ Superficial Lesions				61	61
CSU and MSU		37		7	44
Biopsy Cervix and Curettage Uterus				25	25
Incision of Abscesses Sinuses etc		7			7
TOTAL	142	89	12	93	336

Footnote Total number of patient attendances in the period approximately 1600

CHAPTER II.5

THE EFFECT OF THE DAY BED UNIT ON THE STANDARD OF HOSPITAL SERVICE

Requirements for day bed unit care have been examined in terms of the necessary facilities and services in relation to the type of patient using the system. The objective now was to ascertain whether introduction of the Day Bed Unit had led to an improvement in the speed and ease of treatment and also in changes in the quality of care given.

The effect of introducing the day bed unit was examined from the following points of view:-

i. The change in minor case pattern of day care and inpatient care.
   - A. Change in duration of stay for different minor procedures.
   - B. Change in number of potential day bed cases

ii. The effect on the waiting list for minor operative procedures

iii. The effect on quality of care - complications of treatment.

i. The Change in Minor Case Pattern

The effect of introducing the DBU on the number, type, place of treatment and duration of stay of patients having minor procedures, was examined. The studies were mainly confined to two specialties - gynaecology and urology, with a more limited study in general surgery.

The analysis was carried out on the types of case and duration of stay in hospital in both of these specialties during a period before and a period after the opening of the unit. This analysis was also done on general surgical cases, but was confined to studying the change in pattern of minor procedures carried out in in-patient operating theatres, since details of the considerable number of procedures carried out in the out-patient department prior to the opening of the DBU were not readily available.

Definition of Minor Operations

In order to know which operations might be performed by day bed care it was necessary to classify the procedures examined by grade of severity. The placing of operations into minor, intermediate and major categories in the National Health (Day Bed Accommodation in Hospitals) Regulations, 1953, provided a preliminary means of classifying minor operations performed in the hospital during the periods studied. Certain types of operation which did not appear in the classification, but which had been performed in the hospital as day cases during these periods, were also included. These were the list of minor procedures and associated clinical categories in gynaecology, urology, and general surgery as given in Appendix V.

One minor urological procedure, "change of catheter", was excluded from the study because of lack of information on the number carried out before the DBU opened. In the past the procedure had been conducted often in the in-patient ward area where there was a lack of readily available recorded information on day cases. More recently it had been conducted in the Day Bed Unit.

A Change in Duration of Stay in Hospital for Different Types of Case

The type of case and duration of stay in hospital was examined in minor cases treated during a period of one month in the year prior to the opening of the DBU, and one month in the year following the opening of the unit, as follows:-

Gynaecology	-	April 1968 and April 1969
Urology	-	January 1968 and January 1969
General Surgery	-	January 1968 and January 1969

In selecting time periods, regard was paid to the fact that gynaecology cases were not treated in the DBU in any large number until November 1968 although the unit opened in February 1968.

Gynaecology The patients treated were considered according to diagnostic category.

The total number of minor cases increased from 37 in April 1968 to 64 in April 1969, an increase of 73.0%. This increase is reflected in both of the main broad diagnostic categories. In operations for uterine dysfunction the number increased from 16 to 23 and for cervical erosion etc from 16 to 32 (Table 39).

TABLE 39

DURATION OF STAY FOR GYNAECOLOGICAL MINOR PROCEDURES CARRIED OUT IN APRIL 1968 AND APRIL 1969 BY DIAGNOSTIC CATEGORY, VICTORIA HOSPITAL, KIRKCALDY

Diagnostic Category	April 1968		April 1969	
	Day Stay	Overnight Stay (1 night or more)	Day Stay	Overnight Stay (1 night or more)
Uterine Dysfunction	1	15	15	8
Cervical Erosion/Polyp/ Cervicitis	5	11	28	4
Infertility	-	2	4	-
Others	1	2	2	3
Total	7	30	49	15

A change occurred in the number of these minor cases treated by day care, after the opening of the DBU. (All of the "day" cases were treated in the DBU following its opening). In April 1968 seven cases (18.9%) were in hospital for less than one day, while in April 1969 the number was 49 (76.6%). Again, this change in method of care can be seen for both of the two procedures most commonly carried out: uterine dysfunction and cervical erosion.

Urology

The procedures carried out in urology may be generally classed as "cystoscopy and bouginage". They were examined according to whether the investigation or treatment was primary or review in nature. The effect of grouping according to age on the pattern of care was also analysed.

The number of day cases in January 1968 was 20, and 48 in January 1969 (Table 40), the percentage of minor urological procedures carried out by day care increasing from 52.6 to 81.4. This increase was reflected both in primary and review cases. The percentage of primary cases treated by day care increased from 40.0 to 75.9, while the percentage of review cases treated in this way increased from 66.7 to 86.7. The higher percentage of review cases treated by day care might be expected since this type of case is less complicated and therefore lends itself more to the "day" method of treatment. (Again, all day cases were treated in the DBU following its opening).

In spite of the increase in number of day cases treated after the opening of the DBU, the ratio of elderly:young did not alter (equal numbers of patients under 60 and 60 years and over both in January 1968 and in January 1969: age not known for 2 patients in January 1969). This implies that there was an equal need for improved day bed facilities for both the elderly and the younger patients.

TABLE 40

DURATION OF STAY IN HOSPITAL OF PATIENTS HAVING MINOR UROLOGY OPERATIONS, PRIMARY AND REVIEW AT VICTORIA HOSPITAL, KIRKCALDY, JANUARY 1968 AND JANUARY 1969

	Jan 1968			Jan 1969		
	Day Stay	Overnight Stay	Total	Day Stay	Overnight Stay	Total
Primary	8	12	20	22	7	29
Review	12	6	18	26	4	30
Total	20	18	38	48	11	59

General Surgery

Thirty-two patients had minor operations in January 1968 using in-patient operating facilities. Seventeen were day cases of which five were sigmoidoscopies and the rest were of superficial lesions (glands, cysts, nails etc) under local anaesthesia.

In January 1969 the number of in-patient minor operations was 31, of which only eight were performed on day patients and seven of these eight were sigmoidoscopies (the 8th was an avulsion of toe nail).

There is therefore some confirmation that the majority of minor day procedures are now conducted in facilities other than the main in-patient theatre, with the exception of sigmoidoscopy. No sigmoidoscopy examinations were carried out in the DBU in the year ending May 31 1969, in spite of its apparent suitability as a DBU procedure. The consultant surgeons may have found it more convenient to perform the procedure in an in-patient theatre.

B. Change in Number of Potential Day Bed Cases

The possibility that a number of patients who spent more than one night in hospital could have been treated as day patients was examined. Each case had to fulfil two conditions.

1. The type of operation or investigation was one which had been performed in the past in this hospital as a day case. (In effect, it was found that all the minor operations listed in Appendix VI had been performed as day cases on at least one occasion previously. Therefore, all the listed minor operations performed during these periods fulfil this condition).

2. There was no complicating factor, clinical or social, which might have necessitated a stay in hospital of longer than one day. This evaluation was achieved by scrutiny of individual case records. Emergency cases were assumed to be unsuitable for day care for the purpose of this evaluation. Patients having operations not on the minor operation list, but who might have been treated as day cases, are not considered at this stage.

Gynaecology

After applying the criteria for potential day care to those cases admitted for one night or more, 20 of the 30 minor patients treated in April 1968 and 8 of the 15 in April 1969 can be assessed as being fit for day care treatment (Table 41). None of these potential day cases were aged more than 60 years.

A small number of apparently suitable day cases were still therefore being treated in the in-patient ward in spite of the provision of day care facilities.

TABLE 41

GYNAECOLOGY AND UROLOGY PATIENTS STAYING ONE NIGHT OR MORE

WHO WERE POTENTIAL DAY CASES

	Potentially Suitable for Day Bed Care							Unsuitable for Day Bed Care	Total Number One Night Or More
	Actual Stay in Hospital (Nights)								
	1	2	3	4	5	6	Total		
Gynaecology									
April 1968	1	17	2	-	-	-	20	10	30
April 1969		4	2	1	-	1	8	7	15
Urology									
January 1968	4	3	1	1	-	-	9*	9	18
January 1969	1	4	2	-	2	-	9/	2	11

*4 Primary 5 Review

/7 Primary 2 Review

Urology

The number of actual overnight cases fell from 18 in January 1968 to 11 in January 1969. The number of potential day cases (assessed by the criteria) did not fall: there were nine cases in this category in January 1968 and nine in January 1969, (Table 41). However these represented a fall from 23.7% to 15.3% of the total number of minor cases treated in each of these periods, perhaps a measure of the effect the unit has had in fulfilling the need for day care for many of the cases in this specialty.

Seven of the nine potential day cases treated in January 1969 were for primary investigation and only two were for review. This might be an indication that the unit has fulfilled a need in providing day care facilities for the review type of case. There was still however a residuum of cases of the primary type apparently suitable for day care.

General Surgery

The criteria for potential day care was applied as before to those operative cases admitted for one night or more.

In January 1968 there were only two possible patients - one who had an excision of naevus of face and a second patient who had a biopsy of neck gland performed. In January 1969 there was only one case - an investigation of prostatic hypertrophy by cystoscopy. All other cases were clearly too ill or had some complicating social factor which made day care unsuitable according to the strict criteria for selection adopted. It is concluded that the majority of general surgical minor cases treated as day cases are in fact treated in the Day Bed Unit.

ii. Effect on the Waiting List for Admission to the Day Bed Unit

There was no information available about actual size of the waiting list for patients requiring minor procedures in the hospital. Consequently, in order to assess any changes of duration on the waiting list, the time spent on this list by patients admitted to the unit was measured during the year ending May 31 1969. The median duration on the waiting list was calculated by specialty for each month in the year (Appendix II). Casualties were excluded.

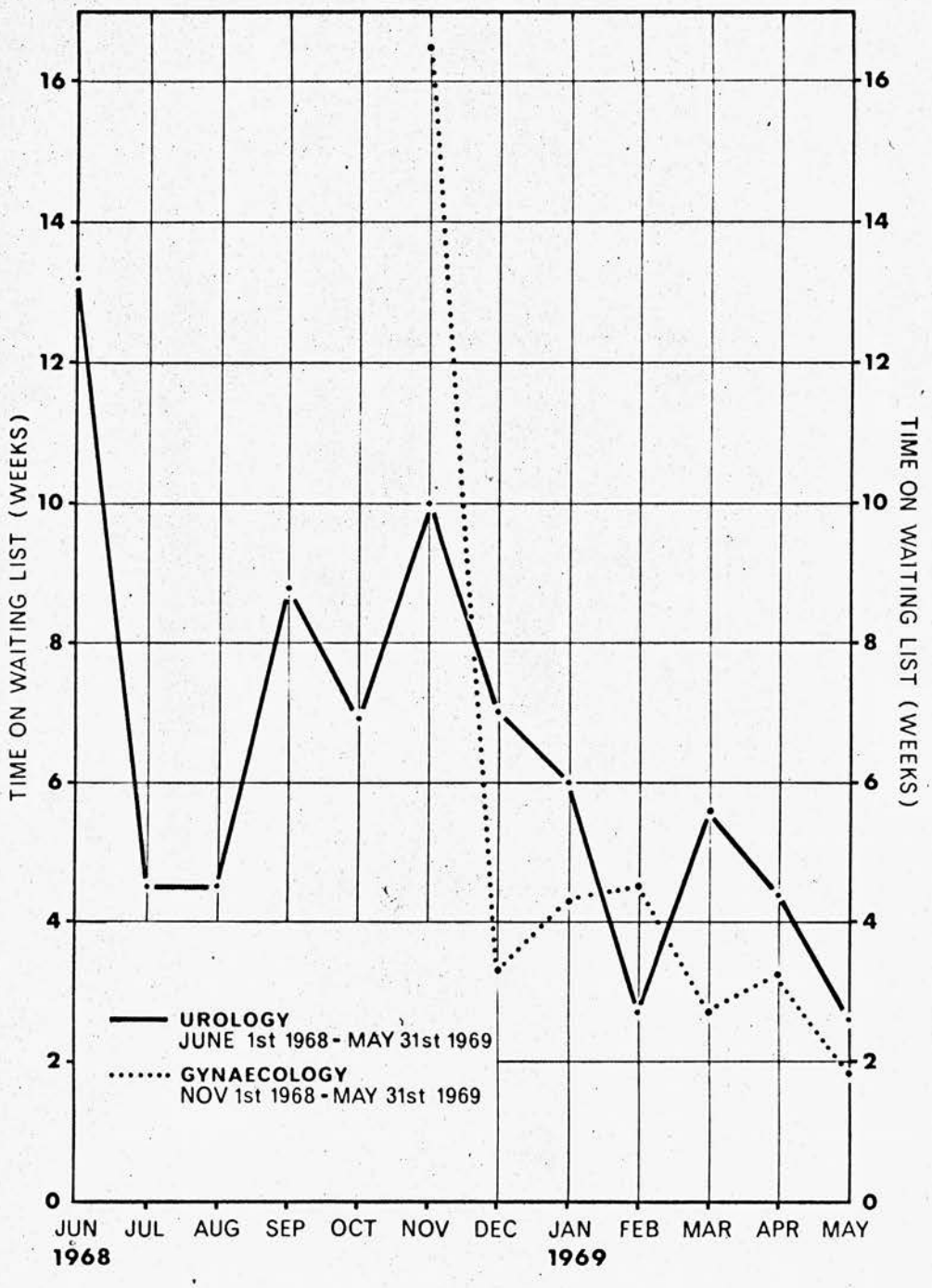
In gynaecology (Fig. 5) there was a definite downward trend in the median wait from November 1968 when the unit was fully open to this specialty. In urology (Fig. 5) there was also a downward trend although this was not so marked. In the other specialties (not shown) there was no obvious downward or upward trend.

Although examination over a long period would be necessary to establish conclusively the effects of the opening of the new facility on the duration spent by patients on the waiting list this evidence tends to confirm that the unit had most effect in gynaecology and to a lesser extent in urology. In both specialties it is likely that the waiting list for minor procedures was reduced following the opening. This trend relates to previous findings in gynaecology and urology which demonstrated an increased proportion in the number of certain types of procedures carried out as day cases.

The absence of upward or downward trend in waiting time in general surgery, orthopaedics and ENT is a reflection in some degree of the fact that no great change took place in the types of procedure carried out as day cases. There was merely a change in

FIGURE 5

MEDIAN TIME ON WAITING LIST FOR TREATMENT AT KIRKCALDY DAY BED UNIT BY MONTH OF ADMISSION



the actual place of treatment and recovery of patients who would normally be treated as day cases. Some benefit would of course result from the opening of the DBU since the demand made on other places of treatment (eg in-patient ward and casualty department), would be relieved.

iii. Quality of Care - Complications of Treatment

While it is possible to measure the impact of the new system of patient care, eg by measuring the number of cases treated, the quality of patient care poses greater problems in that much finer measurements are required and the data for these are not easily obtained. However certain crude indications such as the complication rate are discussed below.

Patients Discharged from the Day Bed Unit and Readmitted as an Emergency to Victoria Hospital within 7 Days

In the period of three months surveyed only two patients came into the group.

Patient 1 (Female)

Admitted to hospital with cellulitis and phlebitis following varicose vein injection in the Day Bed Unit

Patient 2 (Male)

Admitted to hospital with vomiting following lumbar puncture in the Day Bed Unit

The number of patients treated in the Day Bed Unit in this period was 820 giving a readmission to hospital percentage of 0.2%. The

types of operation performed in both of these readmission cases are recognised in many hospitals as safe out-patient procedures. In neither of these particular cases was the patient at any acute risk in being at home when the complication occurred.

It should be noted that the readmission rate continues to remain very low and is a further indication that the procedures carried out in the unit are unlikely to lead to any serious complications.

Domiciliary Patients Transferred to In-Patient Wards from the Day Bed Unit

During the year studied only seven patients at the time of the treatment were not well enough to leave hospital following a stay in the Day Bed Unit, necessitating admission to an in-patient ward.

Three of the seven patients were casualties treated in the Day Bed Unit for bone and joint injuries while another was a member of the hospital staff suffering from status asthmaticus.

Of the remaining patients, one casualty and one attending the surgical out-patient department made use of the day bed unit as a rest point while an in-patient bed was being obtained. It is surprising that more clinicians did not make more use of this method of having patients admitted to an in-patient bed in view of the proximity of the unit to the out-patient facilities and the ease of admission to the unit. If this were to become a regular method of admission in a busy hospital it could of course adversely affect the work of the unit. However, used with discretion it could have a useful cushioning effect on the inflow of patients during a period of acute bed difficulty eg following a major accident.

In accident and emergency cases a period of evaluation has often to take place before a decision as to disposal can be taken. This would explain why a high proportion of the patients finally admitted to in-patient wards from the Day Bed Unit were casualties.

Finally, there was only one patient who became so unwell following treatment in the Day Bed Unit as to require admission to an in-bed. He was thought to have had a myocardial infarction following cystoscopy, although this diagnosis was later excluded.

The majority of patients transferred to an in-patient ward were therefore casualties - 16 per 1000 casualties treated in the unit, and in booked cases - 1 per 1000 booked cases treated. This is perhaps indicative of the relatively minor treatment undertaken in the Unit as well as of the quality of care given.

Conclusions

In the specialties examined in some detail, gynaecology and urology, the total number of minor procedures carried out increased after the day bed unit opened. This increase was due to an increase in the number of day cases. All of the day cases were treated in the new unit.

In gynaecology the number of potential day cases fell over the period. The total number of potential day cases did not fall in urology, but the potential day cases taken as a percentage of the number of minor cases treated in the periods examined before and after the unit opened showed a fall. The greater effect in gynaecology is related to the switch from in-patient care to day care. In urology

many of the patients were already being treated as day patients in in-patient theatre and ward facilities prior to the opening of the new unit and the impact of the new unit was less.

This conclusion is corroborated when the duration spent on the waiting list is examined over a period of time after the day bed unit opened. In gynaecology there is a definite fall in waiting time while in urology the fall is less marked although still present. In other specialties there was no definite pattern observed.

In gynaecology, therefore, the unit had a marked effect on the number of patients treated and in an increased turnover of patients. There was a comparable but lesser effect in urology patients. From the examination of duration of waiting time in other specialties the unit has apparently had little effect on the pattern of care in these specialties. It is likely that there has been little switch from in-patient care to day care in these specialties.

Finally from the low rate of complications resulting from treatment in the day bed unit there was no indication that quality of treatment had been adversely affected by the introduction of the day bed unit.

CHAPTER II.6

THE INTERACTION OF ORGANISATIONAL AND PATIENT PROBLEMS: STANDARDS FOR DAY BED CARE

It is clear that day bed care may assist a hospital to function more efficiently in terms of the use of beds and may have a useful contribution to make to the more productive use of resources. However in order to be effective in providing an efficient service decisions require to be made on certain aspects of operating policy. The types of procedure carried out require to be considered in relation to after effects, the quality of home care and home facilities, the time available for recovery in the unit, the system of patient selection, the organisation and facilities of the day bed unit and other hospital services.

In considering the types of procedure which may be safely carried out in such a unit it seems likely that some procedures are such as to render patients liable to physical stress after the event. Those procedures whose side effects could cause a deterioration of the physical state of the patient are a priori not suitable for this kind of care. Some procedures, although not liable to produce subsequent physical breakdown, may nevertheless produce unpleasant side effects which could cause anxiety or distress, particularly in those with no-one to give them support at home. Other procedures may have needs for aftercare, or after effects which require easy access to a lavatory. Selection of patients should involve specific enquiry into the home circumstances as well as any physical and mental disabilities.

On the basis of these considerations this chapter examines the information on the patient population to consider whether any particular groups of patients can be identified who were not appropriate for selection for day bed care or for whom special provision should be made within the system of day bed care. Finally the problems in the location and organisation of the unit are considered.

Within this general context the following specific factors associated with which difficulties may arise are considered. These factors were identified in previous chapters.

Types of Procedure and After Effects

Patient Selection

Care in Hospital

Transport Requirements

Post Treatment Care

Communications

TYPES OF PROCEDURE AND AFTER EFFECTS

Considerable emphasis is given in the literature to the usefulness of planned short stay care in the treatment of patients requiring moderately severe surgery, for example, hernia repair, varicose vein ligature and stripping. The argument in favour of this category of cases for short stay care is reinforced by the small number of complications and after effects reported. However, the complications discussed tend to be of the more clinically important type. The effect of anxiety or domestic difficulty on the patient is rarely mentioned. Thus Williams noted only one complication, a case of haematoma after a breast operation, severe enough to warrant the patient returning to hospital. Aldridge wrote of three "returns" while in Doran's series of patients only 3.4% had immediate complications (13 patients). These were all quite severe in nature, but he did include one case of 'acute' domestic collapse due to sudden illness of relatives. This description of the group with complications perhaps indicates a rather remote attitude to home difficulties - "Apart from the five chest infections, the rest are oddities of one kind or another, medical, personal and domestic".

Stephens and Dudley found that complications in their system of day bed care were notable by their absence while the few Farquharson readmitted to hospital in the immediate post-operative period were mostly necessitated by oozing from the wound or haematoma formation but he made no other comment on after effects. However there was a hint of the discomfort suffered by patients in his statement that the aim to get the patient back into his own bed while the local

anaesthetic was still effective "was not always entirely successful, but we have had no complaints of serious discomfort". It would be unreasonable perhaps to expect patients to complain about discomfort when it was obvious that the surgeon was doing his best for the patient by treating him under difficult conditions after only a short period on the waiting list.

At Kirkcaldy the safety of the procedures carried out from the clinical point of view was demonstrated by the small number of patients who required to be kept in hospital following day bed treatment and in the small number of patients who required to be readmitted following discharge home. Moreover there has never been a fatality following treatment in Kirkcaldy Day Bed Unit and so far as is known none has occurred in the other day bed centres examined. Thus it may be concluded that the types of operation currently carried out in Kirkcaldy Day Bed Unit are suitable from the point of view of clinical safety. However, from the patient reaction studies carried out both in Kirkcaldy and Edinburgh there is no doubt that many procedures give rise to unpleasant side effects. Some may leave the patient feeling weak and debilitated; others give rise to more specific symptoms. While few of these may cause actual risk to the patient, they do lead to anxiety for the patient and those looking after him at home. The patient requires rest, supervision and freedom from household chores and worries.

Examining the procedures more specifically - In Kirkcaldy the largest number of procedures carried out were ECT, Cystoscopy and the D & C/C group.

ECT is increasingly being carried out as a day procedure in this country, probably more often in mental rather than in general hospitals and its suitability as a day care procedure is therefore of some importance. ECT is known to cause confusion and memory disturbance in some patients in the period immediately following treatment. Kiloh (1968) has referred to the fact that patients who require ECT for endogenous depression often require admission to hospital during treatment while the memory disturbances improve. Clearly the decision to conduct the treatment on a day basis would depend to some extent on the quality of care available at home in the immediate post-treatment phase. The study has shown that this is not always satisfactory. This point will be discussed later in this chapter in the examination of quality of home care.

The follow-up studies on patients treated in the unit confirmed that many side effects occurred following cystoscopy, D & C/C. In the case of cystoscopy, dysuria, frequency of micturition, haematuria, backache and vomiting were all noted, while in D & C/C common symptoms were bleeding and discharge from vagina, backache, and abdominal pain. Following all of these procedures general tiredness and debility was a common experience. Symptoms of this type must be more difficult to manage if certain facilities at home are of a low standard eg inadequate bathing facilities, a shared or outside WC. Again, examples of those under stress in these circumstances might be the elderly and those living alone.

Table 42 shows the proportion of elderly having cystoscopy and ECT: 45.5% of cystoscopy patients were aged 60 years and over, but even in

patients receiving ECT 11.7% were in this age group. The option of overnight stay might be welcomed by some of these patients.

TABLE 42 - AGE OF PATIENTS ATTENDING KDBU FOR ECT AND CYSTOSCOPY: PER CENTAGE DISTRIBUTION: YEAR ENDING 31 MAY 1969

AGE (YEARS)		ECT	CYSTOSCOPY
Less than 60		88.4	54.5
60-69		7.0	25.6
70 and over		4.7	19.9
TOTAL	PER CENT	100.0	100.0
	NUMBER	490	397

The suitability of any form of hospital treatment for a particular patient is obviously not wholly decided by the type of operation or the type of anaesthetic, but to some extent by the characteristics of the patient himself. This applies especially in day bed care where the patient passes out of the care of the hospital soon after treatment and depends to a major degree on his own resources.

Worry About After Effects

It has been shown that many patients worry about after effects (over 18% in both follow-up surveys). About a third of the patients turned for help and reassurance to the family doctor but few of the remainder sought assistance from the hospital and none from the district nurse.

The usefulness of giving forewarning of symptoms in significantly reducing the number who worried was shown in the Gynaecology Follow-up Survey provided that warning of all the symptoms encountered was actually given. There may be difficulty in giving warning of all possible symptoms likely to occur and in trying to achieve this aim there may exist danger of inducing anxiety by excessive forewarning. Clearly a balance should be drawn: the patient could be advised of the most likely symptoms and the remaining after-effects could be left to be dealt with as they occurred and a routine visit by the district nurse might be the best way to arrange for this.

The important factor in assessing the need for aftercare may not be related altogether to the severity of the procedure but to the after-effects which may be expected. For example there is unlikely to be any bleeding following a herniorrhaphy performed by a competent surgeon, but there is a high probability of such an occurrence following a diagnostic dilatation and curettage.

The type of anaesthetic is important. The effects of the general anaesthetic for manipulation of a joint is as likely to lead to after-effects as the effect of a general anaesthetic following herniorrhaphy. Following general anaesthesia the patient should have some supervision. Yet in both follow-up studies it was shown that for many patients the amount of home supervision has been on the whole minimal from the general practitioner and local health authority services.

PATIENT SELECTION

The method of patient selection was considered:

1. Domestic assessment
2. Age limits
3. Clinical assessment

1. Domestic Assessment

The initial consultation in the out-patient department played a large part in the selection process. Doran (1969) stated he was quite confident of his ability to learn of the relevant home circumstances in the majority of patients by this means. Farquharson carried out his process of selection of patients for hernia repair at this stage. While many surgeons, including Farquharson, wrote to the general practitioner informing him of the proposed line of action few actually consulted him as to its suitability. An exception is found in Williams' system in which the general practitioner was asked whether the patient was suitable. Stevens and Dudley assumed that when the general practitioner referred the patient for treatment with the suggestion that day care should be employed then the social circumstances were satisfactory. It was left to Ruckley to suggest that neither the patient, the surgeon nor the general practitioner were always in the best position to assess the home situation and that a better assessment might be carried out by the district nurse.

Dudley (1966) after several years experience of day surgery said that if he were re-embarking on a programme of day surgery he would involve medical social workers, domiciliary nursing staff and psychiatrists as well as general practitioners in the care of the patients.

It is possible that in some instances general practitioners would be aware that day care would be advised by the surgeon to whom the patient was referred and that he might either imply his consent to the system by his referral to that surgeon, or else directly suggest day care in his letter.

The aid of the district nursing service or health visitor service was rarely called upon to carry out domestic evaluation in the systems described in the literature. Ruckley is an exception in his employment of the district nurse.

There was no system of routine domestic assessment in the Kirkcaldy day bed system or in the system of day bed gynaecology at the Royal Infirmary of Edinburgh. There is a social work department in the Victoria Hospital, Kirkcaldy, but this took no part in the work of the day bed unit. While this department might not be able to cope with the social assessment of all patients using the Unit it could take a leading role in collating the social information received from the local authority health services and general practitioners and ensuring that the information was brought to the notice of the hospital clinician.

2. Age Limits

In addition to the physical and mental state of the patient, many of those who have written on short stay surgery involving hernia repair and varicose vein operations have considered age as an independent factor. Thus Stephens and Dudley, Aldridge and Peatfield all excluded patients over 70 years of age while Williams restricted his out-patient hernia operations to those aged 45 years and under.

Farquharson made no restriction, operating on patients from 12-83 years, but all of his patients were treated under local anaesthesia.

It has been shown that many elderly patients were treated at Kirkcaldy Day Bed Unit, and although the procedures tended on the whole to be less severe, many of them involved the administration of general anaesthesia. In the survey 49.1% of patients between the age of 60 and 79 years received a general anaesthetic while 25.6% (22 patients) of those over the age of 80 years received a general anaesthetic.

It was previously noted that Lambertsen (1969) has given a warning over the practice of sending elderly persons for tests of the gall bladder and gastro-intestinal series or barium enema on an ambulatory basis. All of these patients required fasting in addition to extensive cleansing of the intestinal tract. Lambertsen observed signs of physical weakness and fatigue among these patients. This type of procedure was commonly carried out in the Kirkcaldy Unit and in similar units elsewhere. The elderly, in the follow-up study conducted in the Unit, made little complaint of any difficulties which they may have had so that these can only be inferred from observations of the patients as carried out by Lambertsen or from the type of treatment itself and the domestic situation.

It requires to be borne in mind that the elderly are often treated for chronic conditions in day bed units, eg bladder tumour; prostatic enlargement. This means that the proportion of elderly who require to make repeated visits for treatment is high - in the Kirkcaldy

survey over 80% in those aged 75 years or over required to visit more than once since the unit opened (ie over a maximum period of 16 months).

The elderly are less mobile and their lack of transport facilities and unfitness to travel on public transport is reflected in their dependence on ambulance transport to take them to and from the unit.

It has also been shown that the number of elderly who were widowed was high and it may be supposed that a considerable number were living alone (Chapter II.3).

For the reasonably fit elderly patient with adequate help and facilities at home day bed care is obviously a satisfactory system of care. It is the patient who is perhaps rather frail, living alone, or in poor domestic circumstances generally who requires some special care.

In order to ensure adequate care for this group a pre-admission assessment of the home situation by health visitor or medical social worker, at least for the group aged 65 years and over, appears to be an essential preliminary and this assessment could be applied to any patient who appeared to be less robust physically or socially.

It might then be found more suitable to admit some patients for 24 hours or longer for the course of treatment. In the event of day bed care being chosen extra care could be mobilised if necessary in the form of home nursing, "home help" or perhaps "home sitting" if the service were available.

3. The Clinical Assessment

In the short stay systems of care described in the literature, the clinical assessment of suitability was carried out in various ways either by the surgeon himself as in the system of Doran or by the surgeon in conjunction with the anaesthetist as in the system of Stephens and Dudley or Thornton.

In Kirkcaldy clinical assessment was carried out by the appropriate consultant, but the anaesthetist only became involved at the time of the patient's entry to the unit for treatment. There is no doubt that the system most likely to achieve the best clinical selection of patients is one in which the anaesthetist takes part. The system of assessment described by Thornton is a very satisfactory one. Here the anaesthetist's examination is carried out 10-14 days prior to the day of treatment and the final check to exclude upper respiratory infection or other acute illness may then be safely carried out by the house-surgeon. Such a system of clinical evaluation requires organisation and sufficient time has to be allocated by the clinicians involved.

CARE IN HOSPITAL

The following requirements for the care in hospital were considered:

1. Location of the D B U and Functional Relationships
2. General Organisation
3. Administration and Nurse Staffing
4. Facilities and Services
5. Reception of Patients
6. Duration of Stay

1. Location of the Day Bed Unit and Functional Repationships Within the Hospital

It is desirable that the day bed unit be located in a position giving easy access for patients. The main requirements are a reasonably short distance between the bulk of the population to be served and the unit, with good public transport facilities and convenient road access.

In planning future Day Bed Units it should be kept in mind that such units must work in close relationship with certain hospital personnel and services, and that these are not necessarily out-patient in character. It may be advisable to regard Day Bed Unit patients as short-stay in-patients rather than long-stay out-patients, and to integrate Day Bed Units more closely with in-patient facilities. For example - if the unit ward and the unit operating theatre were placed in relationship to the main in-patient theatres then this would obviate the necessity of setting up a separate theatre staff structure and would enable consultant surgeons to supervise the work of junior surgeons. It is important that there

should also be ease of physical access for medical staff who are not on permanent duty within the unit, but should be available to deal with a complication of treatment occurring during the recovery period and to discharge patients from the unit.

If the unit is not sufficiently large to require its own X-ray department then locating it near the main X-ray department would make the journey for patients a short one and would mean that staff taking patients for X-ray would be absent only for short periods from the unit.

Although laboratory services are important, the results of tests are usually not required immediately and the locating of the unit in relation to laboratories is not therefore critical.

Finally the unit should be located near functional units with which staff could be shared, eg the in-patient operating theatres.

2. General Organisation

In order that the day bed unit should function as far as possible as a distinct organisation, certain arrangements in the system of working may be necessary.

Many operations of the type currently carried out in day bed units can be satisfactorily performed by junior clinical staff. To allow consultant surgeons to carry out any necessary supervision, as in orthopaedic surgery at Kirkcaldy, it may be necessary for the latter to operate at a time when the senior surgeons are not operating in the in-patient theatres.

Arrangements may also be necessary to ensure that the day bed unit has adequate access to clinical staff. For example, a junior doctor in each specialty could be made responsible for patients in that specialty treated in the unit. This doctor would be available to give advice on complications arising in the immediate post-operative period and would decide when patients were fit for discharge.

In large units it might be feasible to employ a part-time doctor, eg a married woman, to assess patients prior to operations and to supervise their care prior to discharge. This doctor could also carry out some of the operative procedures and investigations. The question of general practitioners carrying out some or all of the procedures is an important one. It is likely that this form of work would be ideal for some general practitioners - compatible with the skills acquired during their hospital training and compatible also with the demands of the work of general practice. The question will be discussed later.

3. Administration and Nurse Staffing Requirements

Day to day administration of the unit would be more efficiently carried out by a separate administrative staff rather than by the individual specialties. Conflicting demands can thus be more easily identified and resolved. The work of administration should preferably be carried out within the unit itself to facilitate liaison with the sister-in-charge. It should be noted that some difficulty has arisen at Kirkcaldy in keeping the sister-in-charge informed of last minute arrangements for admissions.

A day bed unit requires to be more intensively staffed than a general surgical or medical ward. It has been shown that a variety of medical and surgical procedures may be in progress in the same treatment session. Supervision of patients can then become complicated, most of the patients requiring individual nursing attention at some time during the session.

4. Facilities and Services Required

The arrangement of beds into six bed bays at Kirkcaldy was found to have advantages. Observation of patients was possible and at the same time privacy between the bays enabled patients of both sexes as well as children and adults to be treated simultaneously.

The number of beds required may be inferred from the attendance rate/general population by age calculated for individual operations carried out in the Kirkcaldy Unit (Chapter II.4). This affords a means of calculating an approximate number of beds required per operation for any other population thus giving a method of applying the experience of this day bed unit in planning units elsewhere.

The provision of an operating theatre solely for day bed unit cases is essential. The sharing of theatre facilities with other departments would undoubtedly delay the through-put of patients in the unit.

The treatment room was found to be a great asset, with 43.8% of cases being treated there in the course of the year studied at Kirkcaldy. The essential features of this room are scrub-up facilities, a theatre table, anaesthetic facilites and if possible anti-static safeguards.

X-ray facilities are required. The specialty making considerable use of this service is, of course, orthopaedics, but other specialties made use of X-rays and a considerable number of contrast media X-rays were conducted on day bed patients in general surgery and medicine.

The need for an X-ray unit for the sole use of the day bed unit would depend on the number of X-ray diagnostic procedures carried out. From the figures available at Kirkcaldy and the types of procedure carried out currently in day bed units it would seem more economical for the unit to share the X-ray facilities with other hospital departments.

The results of a survey at Kirkcaldy showed that a laboratory service - pathology, haematology and bacteriology is required. Although its location is not likely to be important, the administration of such a service would obviously be facilitated if the service were situated near at hand, for example within the same hospital complex.

Catering facilities for patients should be limited to providing light meals only and these may be prepared in the ward kitchen within the unit. Patients do not usually require a full meal during their period of stay.

Changing and clothes storage facilites were inadequate at Kirkcaldy. These facilities should be provided for the maximum number of patients of either sex present in one session.

As a result of observing the operation of the unit at Kirkcaldy it was thought reasonable that waiting/rest facilities should be provided with comfortable seating for two-thirds of the maximum

number of patients normally treated in one session. The type of chair is important bearing in mind that many patients will have recently received a general anaesthetic. All should be armchairs of the easy type. A proportion should be of the high backed, geriatric type in view of the number of old people treated. Patients who require to rest in the prone position are really unfit to be discharged home and should be kept in bed. There are exceptions eg a patient recovering from lumbar puncture may require to go home on a stretcher and such a patient should be transferred from day bed to stretcher and thence to an ambulance and should not normally require to make use of the rest room.

The rest room should be within easy access of toilet facilities and these should be adequate in number bearing in mind that many patients will have recently undergone cystoscopy or minor gynaecological procedures.

5. Reception of Patients

A good system for receiving patients at the hospital is essential. A visit to the unit must be an anxious time for many, the majority of whom will undergo an operative procedure within an hour of arrival. Yet in the Kirkcaldy Unit one patient in twelve had difficulty even in finding the unit. Once they had found the unit, patients were unanimous in their praise for the kindly way they were greeted and treated. All that was required here therefore was a better method of receiving and directing patients at the hospital entrance.

6. Duration of Stay

One danger of the day bed unit with a rapid turnover is that some patients may be discharged before they feel sufficiently recovered.

The period of recovery is likely to vary not only for the differing types of procedure but for different patients.

The duration of stay for procedures in the Kirkcaldy unit is shown in Table 32. Some variation does occur but the maximum mean or median duration never exceeded $4\frac{1}{2}$ hours in any procedure in which general anaesthesia was used. In the system practised in Kirkcaldy Day Bed Unit flexibility in time of discharge from hospital following treatment was noted. Exceptionally, a patient who had insufficiently recovered, stayed in the Unit after the current treatment session was over and could if necessary be transferred to an in-patient ward. However, the system of treatment sessions meant that the majority of patients treated in the morning session required to be discharged prior to the beginning of the afternoon session and patients treated in the afternoon before the Unit closed down in the early evening. This might mean that the decision to discharge was influenced by the timing of the sessions. While it may be clinically safe for the patient to travel home a short time after an operation in which he had a general anaesthetic, some patients, eg the elderly, may not feel sufficiently recovered to travel at this time. Indeed, it would be reasonable to assume that elderly patients receiving general anaesthesia would take longer to recover and therefore spend longer in the day bed unit than younger patients. However excluding children under five years the duration of stay in the Kirkcaldy Unit remained remarkably constant with increasing age (Table 43), and it is likely that this is related to the method of running the unit.

TABLE 43

MEAN DURATION OF STAY BY AGE GROUP FOR PATIENTS HAVING GENERAL ANAESTHESIA - KIRKCALDY DAY BED UNIT - YEAR ENDING MAY 21, 1969

	Age				
	0–4 years	4–15 years	15–44 years	45–59 years	60+ years
Mean Duration of Stay in Day Bed Unit (hours)	2.6	3.1	3.2	3.3	3.4

It was shown in the Kirkcaldy Follow-up Survey that one patient in seven having an operation of the D & C/C type and one patient in 20 having a cystoscopy would have preferred a longer period of recovery. This was likely to be due to the combination of the effect of the operation and that of the anaesthetic. In the case of cystoscopy the patients were predominantly elderly and therefore might have been more vulnerable to after effects of operation and anaesthetic - sore throat, chest pain, nausea, vomiting, dizziness, cough and general malaise.

Clearly the system should be sufficiently flexible to allow patients to remain in the hospital until recovery is complete. The most satisfactory arrangement is one where the patient remains in the unit and to achieve this, part or all of the unit would require to remain open overnight. With such a system the need to make an arrangement to admit the patient to an in-patient ward would disappear. Such an arrangement is never an easy one to make in a busy general hospital.

It is therefore recommended that a proportion of beds be reserved for overnight stay to allow those who are not feeling well and those who might have domestic difficulty to remain longer in the unit.

TRANSPORT REQUIREMENTS

The transporting of patients is important on two counts:

1. Comfort of Travel
2. Turnover of Patients

1. Comfort of Travel

The ordeal of travelling home was considered by some of the protagonists of planned short stay care. Thus Farquharson who operated on hernia under local anaesthesia allowed his patients to dress and walk to the ambulance immediately after operation, but insisted the patient be carried from the ambulance to bed at the other end since by that time the anaesthetic would be wearing off.

Peatfield (1969) showed how a high quality of care can be nullified by inadequate travel arrangements. On the whole travel discomfort receives only cursory attention in the literature. However, the patient follow-up surveys conducted as part of the present study showed a large number of patients to have had discomfort - 33.0% of patients in the Kirkcaldy survey and 42.9% in the Gynaecology Follow-up Survey.

Alleviation of travel discomfort may be attempted in at least three ways -

i. Prolonging the stay in hospital following certain procedures
ii. Keeping to a minimum the duration of the homeward journey
iii. Selection of an appropriate method of transport.

i. Prolonging the Stay in Hospital

It is clear that patients having certain procedures should be considered for a longer period of recovery in hospital (page 121).

Examples suggested from the table are patients having operations in the D & C/C group and those having lumbar puncture. In order to achieve a maximum recovery period the operations should be carried out as early as possible in the working day and the patients kept in the unit until late afternoon. This is basically the system adopted in the Gynaecology Department of the Royal Infirmary. Patients who do not feel sufficiently recovered should be allowed to stay overnight.

ii. Keeping to a Minimum the Duration of the Homeward Journey

The distance of the patient's home from hospital was clearly in the minds of many of those who have written on planned short stay care. Yet the use of distance alone to decide whether the patient's home is suitably situated in relation to the hospital is likely to be an oversimplification of the problem. The time taken by various forms of transport on the journey to and from hospital is surely the important factor from the patient's point of view. Time taken is related to distance, the accessibility of the patient's home and the speed of travel.

Of these three, distance is the most easily estimated. However, there was no consistent opinion amongst those writing on planned short stay surgery as to what constituted a reasonable maximum distance for the patient to travel. The limit placed on distance is necessarily arbitrary as Stephens and Dudley admit. They eventually treated patients living up to 45 miles from hospital. Yet Ruckley et al confined the use of day care for herniorrhaphy to those living within the boundary of the city in which he operated (ie approximately a 5-10 mile radius).

Moreover, it was shown that not all patients who lived close at hand took a short time to reach home after treatment (P 120).

Many large hospitals are situated within large urban areas and traffic congestion can slow down movement of patients in and out of the hospital. Nixon (1967) has pointed out the difficulty of transporting patients in London, and for this reason recommends day patients to stay in or near London overnight. Because day bed units tend to be organised along a normal working day the patients often have to be sent home at peak travel times - lunch or late afternoon. There may be considerable difficulty in adjusting the working of a unit to avoid this problem.

Even in rural areas the accessibility of the patient's home can be a problem. The surgeon may be unaware of such difficulties. There are still gated roads in many rural areas which can take a remarkably long time to negotiate. Some farms and cottages have no 'made-up' road and it is not unknown for the only means of covering the last hundred or more yards to a patient's home to be on foot. It is clear that a proper assessment of the patient's domestic situation must take accessibility of the home into account.

It is reasonable to assume that public transport would often entail a prolonged journey home and on that score alone would be deemed an unsuitable means of transport following day bed treatment involving, for example, general anaesthesia.

However there may be difficulty in deciding between other possible methods of travel. Thus, there may be little to choose between the

private car and the ambulance in the speed of travel although the ambulance may take considerably longer since a number of patients may be carried at a time. However, the ambulance may be more suitable for carrying home the patient who has been recently operated upon. He can lie down. There are facilities and some space to deal with after effects such as vomiting or bleeding. The ambulance is usually manned by a two-man crew and the patient can therefore be carried indoors on reaching home if this is considered clinically desirable.

At Kirkcaldy it was shown that the ambulance journey home was often prolonged (page 117). Many of the patients carried by ambulance had recently received a general anaesthetic and a high proportion were elderly (figure 2). It may be impossible to restrict the number of patients carried by an ambulance to one, but the number should be kept as low as possible in order to speed the homeward journey.

iii. Selection of an Appropriate Method of Travel

In the present studies the method of travel was shown to be unsatisfactory for a number of patients. Thus, during the year ending 31 May 1969, 36 patients who received general anaesthesia travelled home from the Kirkcaldy Unit on foot or on public transport. In the Gynaecology Follow-Up Survey it was found that 19.5% of the patients went home by public transport and 2.4% on foot. Yet all of these patients had general anaesthesia.

Since it is unlikely that any of the patients at either unit who received a general anaesthetic and then set out for home on foot or public transport would have been allowed to do so knowingly by the staff

of the units concerned a need is thereby demonstrated for a more careful control of travel home from day bed units involving the assessment of requirements on an individual basis.

2. Efficient Throughput of Patients

Delay in arrival at or in leaving the hospital is more critical for the efficient treating of a day bed patient than for an in-patient. In the day unit each process is compressed in time; the admission, treatment, recovery and discharge must be accomplished within the duration of one session - often within a morning or an afternoon. It is therefore important to ensure that delay is kept to a minimum.

Punctuality in arrival: The majority of patients who travelled to the Kirkcaldy unit on foot, by car or by public transport arrived on time or not more than 10 minutes late. However only approximately half of those who travelled by ambulance came into this category (Table 31). 24.1% of those living within two miles of the hospital were more than 30 minutes late and 18.8% of those living two miles or more from the hospital.

Punctuality in leaving: It was shown at Kirkcaldy that patients waiting for an ambulance to take them home after treatment were delayed longer than those who went home by other means. It was found that of the patients waiting for ambulance transport home 17.5% waited between one and two hours and 1.6% waited more than two hours.

The ambulance service is organised to move ill people to hospital as quickly as possible. In day bed care a novel situation has arisen in which patients recently recovered from treatment and likely to be under some stress need to be transported efficiently from hospital to home.

Although the difficulties demonstrated at Kirkcaldy may not be a characteristic of all day bed units they highlight the need to give careful thought to the problem of patient movement in the setting up of these systems of care.

At Kirkcaldy it is possible that adjustment of the system within the day bed unit itself might provide at least a partial solution. The area ambulance department has indicated that an improved service could be given if longer notice of ambulance requirements were known. The mean duration of time spent by different types of case in the Day Bed Unit is known (Table 32). Using this information together with previous experience of similar cases the unit sister should be able to give early notice of ambulance requirements to the ambulance officer. The feasibility of giving early notice is shown by Dudley (1966) who was able to give four hours warning of the journey home.

There is a case for setting up a patient travel organisation in which information relating to the physical and mental state is employed in the planning of patient travel to and from hospital.

POST TREATMENT CARE

The following factors were considered in post treatment care.

1. Role of the general practitioner and district nurse
2. Support at home and home responsibilities
3. Home facilities

1. Role of the General Practitioner and District Nurse

In order to provide a satisfactory standard of post-operative care at home, surgeons carrying out herniorrhaphy and varicose vein operations as short stay cases generally recognised the need to organise some form of clinical supervision. The help of general practitioner and district nurse was often sought and occasionally the hospital itself sent clinicians or nurses to visit at home.

The district nurse was the mainstay of support at home in many of the systems of care described. Williams, Ruckley et al, Peatfield, Aldridge and Follis all made use of this service. There was undoubtedly more certainty that the district nurse would visit than would the general practitioner. Doran commented that "some doctors always visit their patient as requested; others do not". The decision to visit has to be left to the GP. In selecting his patients for day care Williams recognised the problem when he insisted that "the general practitioner must be willing to visit the patient at home on the evening of the operation and at least once more afterwards".

Donald (1964) noted that general practitioners varied in their willingness to supervise patients at home after a short stay including even minor operations in hospital. Ruckley et al may have solved the problem by performing day bed operations on patients whose GP's

were known to give some attention to post treatment care. Even in Ruckley's practice however, it was noted that some GP's left most of the visits to the district nurse.

This inability to control the care given by GP's is perhaps reflected in Stephen's and Dudley's practice of home visiting by medical staff from their own unit.

Although current day bed unit practice is often involved with operations of lesser degree of severity than, for example, herniorrhaphy, procedures are carried out which lead to after-effects and anxiety, eg D & C/C and related operations; cystoscopy; lumber puncture. Yet at Kirkcaldy, 17.4% of the patients in the Follow-up Survey made no contact with the GP or the hospital until at least four weeks had elapsed after treatment. While, of the 68 patients treated by D & C/C or related operation, 32 made no contact with the GP and were not seen at hospital until at least four weeks after treatment. In the Gynaecology Follow-up Survey the great majority of patients were seen at hospital six weeks after the date of treatment, but 63.3% never saw their GP following treatment. Since the district nurse service was not routinely involved in either system of care it follows that many patients had no medical supervision during the immediate post-operative period.

There is little doubt that for these types of operation a visit by the general practitioner is necessary soon after the return home to confirm that clinically all is well, to reassure the patient, and to establish liaison between patient, GP and district nurse. Much of the post treatment supervision can then often devolve upon the district nurse.

Thus changing of wound dressings and removal of sutures following, for example, excision of a superficial cyst, is clearly the task of a competent nurse. In addition the nurse could cope with many of the after effects experienced by patients - the bleeding and discharge following gynaecological procedures, headache and pain in general. Sleep could be ensured on the first night in the same manner. It is only in the more serious types of after effect, such as amnesia and confusion following ECT or when less serious after effects become prolonged and begin to cause anxiety to the patient, that the help of the family doctor becomes essential.

Titcombe and Dootson thought that the role of the GP as outlined above was 'humiliating' and that the most junior house surgeon could carry out these duties. However, there is no doubt that the post-operative care of patients requires knowledge and skill and the reassurance which the patient needs living at some distance from clinical help can only be provided by the family doctor. Titcombe and Dootson's other contention that the treatment itself could be carried out by the family doctor is no doubt true in certain circumstances and will be considered later. At the same time a suggested organisation for day bed pre-assessment, treatment and after-care will be discussed.

2. Support at Home and Home Responsibilities

The ability to provide day bed care with a minimum of risk and strain in order to equal standards of hospital in-patient care depends on the standard of services available at home.

One of the most important of these is the presence of a home attendant capable at least of summoning assistance if required. Young children cannot be classed as home attendants, eg those less than 14 years although some young children could obviously summon aid. The housebound would also be precluded eg the failing elderly spouse. Ideally the home attendant should be capable of something more than merely summoning assistance and should be able to carry out tasks in personal care and domestic duties including the preparation of meals.

There was little indication from the literature as to whether patients who were scheduled for planned short-stay surgery were asked about the amount of support available at home. Two exceptions occurred in gynaecology. Craig (1970) ascertained at the out-patient consultation whether the patient had someone to remain with her at home "for a few hours", while Mills (1959) wrote of "precautions taken to ensure that patients would not be left alone in their homes". It is possible, in addition, that in those systems where general practitioners were brought in at an early stage (Williams: Ruckley: Stephens and Dudley) that the question of care at home was discussed.

In the patient Follow-up Survey conducted at Kirkcaldy a number of patients who had procedures carried out under general anaesthesia had no one at home. The questionnaire, however, only identified

these patients who had no one at home all of the time, and therefore information was sought in the Gynaecology Follow-up Survey on those who only had someone at home for part of the time. It was discovered then that a considerable proportion (approx 50%) of patients had no-one at home during part of the day or night in the period immediately following operation. The great majority of the operations carried out required general anaesthesia and involved either dilatation or cervix and curettage, cautery of cervix or hystero salpingogram or a combination of these. It would be reasonable to assume that patients having these procedures should have someone at home during the first 24-48 hours after operation.

3. Home Facilities

In the Kirkcaldy Follow-up Survey 8.6% of patients had no bath in the home and a further 4.3% shared a bath with another household. These percentages were repeated approximately in the group of patients who had a D & C/C performed, while in the Gynaecology Follow-up Survey 10% were without a bath in the home, and 2% shared one with another household. It is clear that admission to hospital as short-stay cases for one or two nights would have been more suitable for many of these patients.

In the Kirkcaldy Follow-up Survey 20 patients (6.1%) shared WC facilities with another household, and in the Gynaecology Follow-up Survey, seven patients (3.3%) shared a WC with another household. It is likely that some of these patients would have benefited by spending one night at least in hospital following operation.

The functional relationship of living accommodation was also considered in the Gynaecology Follow-up Survey. Five patients of the

210 surveyed had living accommodation, WC, bathroom, kitchen and bedroom separated by two flights of stairs or more. Again it is likely that such patients would have benefited by spending at least one night in hospital after operation. However some of the 72 patients with only one flight of stairs within their home should similarly have stayed longer in hospital since many patients began domestic duties very soon after returning home (over half of the female patients in Kirkcaldy who had a general anaesthetic were carrying out domestic duties on the day after treatment).

In the Kirkcaldy Survey 4.3% of patients admitted to having difficulty with domestic arrangements arising from their treatment as day bed patients and in the Gynaecology Follow-up Survey 10%. The fact that not all procedures were of the same severity in the former as they were in the Gynaecology Follow-up Survey - (eg not all required general anaesthesia) may account for the smaller percentage.

The problem of home responsibilities is also relevant: twenty patients in the Gynaecology Survey (9.5%) had three or more children at home aged less than 14 years and as many as 109 (51.9%) had one or more children less than 14 years old at home; four patients had a parent or parents at home for whom the patient was responsible. While day bed care may be an advantage from the children's point of view, it does mean that the mother may need to get back on her feet to look after the family at an early stage in the post-operative period.

If other help is not adequate, help in the home or even one night stay in hospital after treatment may be useful. Certainly knowledge

of the home situation should be available to the hospital clinician before he selects the method of care. Where any doubt existed a visit to the patient's home by the district nurse would clarify the situation.

The time of resumption of domestic duties was examined in the course of the Kirkcaldy Follow-up Survey. It was found that among female patients treated under general anaesthesia 25.0% resumed domestic duties on the same day as the operation.

Swarbreck's warning given in 1950 concerning early rising in patients who were delivered at home is relevent. He believed it might lead mothers to resume domestic duties too soon after delivery. Stephens and Dudley (1961) pointed out that one advantage for a woman having herniorrhaphy performed as a day patient was that she could at least exercise control over the family, even though for a few days she could not take an active part in the housework. However, there seems to be some danger that she will feel impelled in some situation to take too active a part and a system of post-operative supervision to ensure that the patient receives adequate rest seems essential. Such a patient might therefore benefit from the "home help" service provided by the local authority. A similar argument may be made with regard to the time of return to work. In the KDBU Follow-up Survey it was found that 36.7% of those in paid employment treated by D & C/C were back at work within two days of the operation. While there may be some reason for these women to return to work so early, it is difficult to escape the conclusion that they received inadequate rest at this time.

COMMUNICATIONS

An efficient system of communication is essential (in short stay care) between the patient, the hospital, the general practitioner and the district nurse. Care of the patient is divided between the hospital and domiciliary services and because of this physical separation between those giving the treatment and those giving after care communication difficulties must arise. Secondly, the period spent by the patient in hospital is short and during that time certain necessary information must be passed to the patient. This information concerns the nature of the treatment and its result, likely after-effects and the aftercare required, whether and when to contact the general practitioner and district nurse.

Information is required for the following:-

the hospital clinician - on home circumstances

the patient - i. giving notice of admission

- ii. on the system of care

- iii. on treatment and after-effects

the general practitioner and district nurse - on details of treatment

the patient and general practitioner - on results of treatment or investigation

Information for the Hospital Clinician - Home Circumstances

The need for this information has been discussed but the method of obtaining it is important. If the clinician is to inform the patient at the out-patient consultation how he proposes to carry out the

treatment all the relevant domestic information should be available to him at this time. Some method of assessing the home circumstances of potential day patients is therefore required beforehand.

One way might be for a house doctor to read the general practitioner's letter of request and in the light of the treatment likely to be required and other information given, to decide whether further assessment of the home is required. If assessment is necessary, the help of the district nursing or health visiting service would be sought. To ensure the collection of all relevant information the district nurse could complete a proforma containing the following suggested items -

Proximity and accessibility of the patient's home

Presence of someone at home capable of giving help

(personal care: domestic help: capable of summoning assistance)

WC and bathing facilities - adequacy: accessibility

Dependents at home - number and description

(children under 14: the elderly: chronic sick)

Time which the patient requires to take off work

Additional relevant information could be given together with a recommendation as to the suitability for day bed care. In the case of patients having ECT a visit by a psychiatric social worker would be appropriate.

Information for the Patient

i. Notice of Admission

The notice of admission to the Unit given was between two days and one week for half of the patients (Kirkcaldy Follow-up Survey). It is

unlikely that such a short notice was often related to urgency in the patient's clinical condition. Thus of 14 patients who had a cystoscopy performed all but 13 were on the waiting list for treatment for two weeks or more, yet 62 were given notice of admission of less than one week.

One of the desirable features of this form of hospital care is that it can be planned. Not only can the patient be confidently informed of the duration of stay in hospital, but he can be given a reasonably confident date of admission to the unit. If some doubt existed, for example due to staff shortage, the date could be confirmed perhaps a week before the treatment was due.

ii. Information on the System of Care

Only one patient in four knew anything about the proposed system of treatment prior to entering the Kirkcaldy unit (page 89). Using the Registrar General's Classification it was found that Social Classes I and II apparently knew less about the system than did Social Classes III (Nonmanual and Manual) and IV. This may be related to a higher expectation of information from classes I and II. Cartwright (1964) found a similar trend in studying information needs amongst in-patients.

With regard to instructions given to patients beforehand, some descriptions of short stay care mention items such as the diet to be taken on the day before entry and the clothes to bring (Hall). However, the only system described in detail is that of Cohen and Dillon (1966). Perhaps this could be adopted in this country with advantage. Information was sent to each patient concerning -

the signing of the consent form

the need for a routine blood and urine test during the 10 days prior to entry

instructions regarding eating and drinking prior to entry

the need for removal of all nail polish from fingernails and toenails prior to entry;

the examination which would be carried out by the anaesthetist who would answer questions concerning anaesthesia: the giving of premedication;

the place of rest after operation and the method of check up by the doctor prior to discharge;

the need to be accompanied on the way home;

the disbarring from driving a car to go home and disallowing travel on a public vehicle;

the need to let the hospital know if illness supervenes prior to entry to the unit, eg a cold.

There is no record in the literature of a similar system of information for short stay patients in this country. It is clear that written instructions and information for the patient prior to entry of the type described would help the patient to make arrangements at home and give general reassurance.

iii. Treatment and After-effects

Consideration also requires to be given to the advice imparted to patients on discharge home in view of the considerable number of procedures shown frequently to cause unpleasant after-effects. There was some evidence to show that when patients were given warning about all the after-effects from which they subsequently suffered then the number who worried was significantly reduced (page 96). Clearly it would be impossible to warn patients about all the possible after-effects (many different kinds were found in the surveys) but it should be possible to give routine warning of certain symptoms. In addition, the

patients need to be told to whom they may turn for help, what drugs they may safely take and given reassurance. They would be relieved to know that their doctor and district nurse had been informed of the treatment and when they might expect a visit. It may be difficult to decide which patients would merit this type of follow-up, but as a general rule patients treated by general anaesthesia should be included. There are clearly several ways of conveying the information. The most direct method is by the hospital clinician prior to discharge home. However it may be asking too much of a patient recovering from a general anaesthetic to remember to ask all the relevant questions or to remember the information given. In a survey of in-patients Cartwright (1964) found that three-fifths of the patients reported some difficulty in getting information while in hospital and 19% of this group had been unable to think of all the things they wanted to ask the doctors while they were there, and only thought of some things afterwards. Cartwright also noted that doctors tend to underestimate both the patients' desire for information and their ability to understand explanations. It might be more advantageous therefore for some of this information to be given to the patient in the form of an information booklet beforehand. This could be augmented by extra information for a particular treatment or investigation eg for D & C/C or related gynaecological procedure; for cystoscopy and perhaps for ECT. This system should not take the place of an explanation from the hospital doctor and the sister prior to discharge but should augment this explanation. The printed information could be combined with instructions of the type issued by Cohen and Dillon (page 46).

Information for General Practitioner and District Nurse - Details of Treatment

Lockwood (1970) has emphasised the need to make essential information available to the general practitioner soon after a patient is discharged from hospital.

The general practitioner and district nurse may be given information on the treatment by telephone, by posted letter or by letter conveyed by the patient, or by a combination of these. In the system at Kirkcaldy and at the Gynaecology Department of the Royal Infirmary of Edinburgh information was passed by a posted letter, but even when posted on the day of treatment the letter did not reach its destination until the following day. Perhaps a system of telephoning doctor or nurse, as described by Ruckley et al, and the sending of a treatment record sheet as described by Hall is the most certain way of ensuring uninterrupted post-treatment care.

Information for Patient and General Practitioner - Result of Treatment or Investigation

Many of the procedures carried out in the systems of day bed care studied were such that the patient would wish to know the result from the general practitioner or hospital clinician.

At Kirkcaldy, 17.4% of the patients made no contact with the general practitioner or the hospital until at least four weeks after treatment. While of the 68 patients treated by D & C/C or related procedures, 32 made no contact with the GP and were not seen at hospital until at least four weeks after treatment. In the Gynaecology Follow-up Survey, the great majority of patients were seen at hospital six weeks after the date of treatment but 63.3% never saw their GP

following treatment. Since the district nurse service was not routinely involved in either system of care it follows that not only did many patients have no medical supervision during the immediate post-operative period, but many had to wait at least one month for the result of treatment. It may be argued that it is up to the patient to find this information, but this may be more difficult for the patient than is generally realised. Cartwright, in discussing the difficulties of in-patients gaining information, found that the diffidence of patients, the circumstances of consultation and the lack of generally accepted and clearly defined channels of communication were handicaps. If in-patients who are in contact with hospital staff over a relatively longer period find difficulty in gaining information as in Cartwright's study, how much more difficult might it be for the short stay patient to find out the result of treatment within the more loosely organised domiciliary care service. Particular arrangements require to be made to meet this deficiency.

The family doctor should be the prime source of information for the patient concerning the operation and its results. Such information would usually be available 1-2 weeks after operation and in most cases the patient would be well enough by this time to visit the doctor at his surgery to learn the information. Although it is normal practice for the patient to make his own appointment with the family doctor there seems no reason why the hospital should not make the first follow-up appointment between patient and family doctor. This would help to ensure continuity of care after discharge from hospital and ensure that the family doctor received diagnostic information at an early date.

SUMMARY & CONCLUSIONS

It is clear that although the types of operation carried out in day bed units are less major in nature than those carried out by Farquharson or Stephens and Dudley there are requirements which it is necessary to meet in order to achieve a satisfactory standard of care. Many of the procedures currently carried out in Kirkcaldy and other day bed units can lead to after effects and although these may be clinically minor the patients require a high standard of care on return home.

An assessment of suitability for day bed care is often necessary. Enquiry should be made, for example, into age, the amount of support available at home, the bathing and sanitary facilities and stairs in the home. This assessment could be carried out to a great extent by completion by the patient of a simple questionnaire as part of the hospital out-patient examination. In the case of the elderly or where there is any doubt concerning the health or home circumstances a visit by a health visitor or district nurse would be helpful.

At the hospital, good reception facilities are necessary keeping in mind that for many patients the operation must be considered an ordeal. In the unit itself, certain facilities are required eg operating facilities, easy access to X-ray facilities, those concerned with rest and adequate sanitary and changing facilities. Information concerning the treatment is essential for many patients and reassurance concerning after effects is important with regard to some procedures. Afterwards, the majority of patients who have received a general anaesthetic require a quick and comfortable means of getting home.

In order to ensure adequate post-operative care, information concerning the operation should be given to the district nurse service and the family doctor on the day of operation. Support in the home is thereafter required for many patients by the district nurse, family doctor and in some cases by the 'home-help' service. Finally, any necessary information concerning the result of treatment should be conveyed to the patient at the earliest opportunity and often this could be best carried out by the family doctor.

In day bed unit care it is essential that good communication should exist between the various parties - the patient, family doctor, district nurse, hospital doctor and nurse, and between the day bed unit and the Ambulance Officer.

PART 3 FUTURE DEVELOPMENTS

CHAPTER III.1

EXTENDING THE RANGE OF CARE

The possibility of extending the list of procedures currently carried out in Kirkcaldy Day Bed Unit was examined. Procedures were considered which might be suitable for one night stay in the unit as well as those suitable for day care. The clinicians themselves have not considered additional procedures suitable for day care since the unit opened, but they have considered the possibility of treating certain overnight cases in the unit. These suggested procedures are considered here together with other sources of information on potential day or overnight cases.

The information was derived from three sources in the hospital

1. A computer print list of short-stay in-patient cases discharged from hospital for 1966.
2. A list of potential 24 hour cases supplied by the consultants.
3. A study of individual records of minor in-patient cases in the hospital.

1. A computer print-out list of in-patients discharged during one year (1966) was examined.

In order to have reasonably large groups of short-stay cases to consider, diagnoses were selected where the ratio of the number of patients who stayed 1-5 days in hospital to the number who stayed six days or more was greater than 2:1. The diagnostic categories identified in this way, in which the number of cases was 20 or more in the year, were then examined (Table 44).

TABLE 44: DIAGNOSTIC CATEGORIES WHERE THE RATIO OF THE NUMBER OF IN-PATIENTS DISCHARGED FROM HOSPITAL IN 5 DAYS OR LESS TO THE NUMBER DISCHARGED IN MORE THAN 5 DAYS EQUALS OR IS GREATER THAN 2:1 (NUMBER OF CASES 20 OR MORE)

VICTORIA HOSPITAL, KIRKCALDY 1966

Benign Neoplasm of Breast	21	Diseases of Menstruation	147
Chronic Cystic Disease of Breast	32	Sterility	24
Pharyngitis	46	Leucorrhoea and Other Diseases of Female Genitals	20
Tonsils and Adenoids	213	Abortion without Sepsis	211
Redundant Prepuce and Phimosis	20	Abdominal Pain	108
Cervicitis	80	Poisoning (all types)	145
Vaginitis and Vulvitis	24	Early Complications of Surgical Procedures	22
Malposition of Uterus	25	Epistaxis	29
		TOTAL	1167

Benign Neoplasm of Breast and Chronic Cystic Disease of Breast

Williams (1969) has performed wedge resection of breast on out-patients. Patients who require to have further treatment such as mastectomy would of course require to be transferred from the Day Bed Unit to the in-patient wards.

Tonsillectomies and Adenoidectomies tend to spend 48 hours in hospital so that they are already incorporated in a short stay system of hospital care. Moreover considerable medical supervision is required during this period in order to prevent subsequent infection and secondary haemorrhage. There would therefore be no benefit in reducing the stay in hospital to 24 hours.

Redundant Prepuce and Phimosis

Circumcision has been performed in children as a day procedure in several centres. Lawrie (1964) has described the advantages. He emphasised especially that there was much less disturbance in the family both at the time of operation and afterwards.

It might be possible therefore to establish the procedure in Kirkcaldy at least as an overnight if not as a day procedure.

Cervicitis: Vaginitis: Vulvitis: Malposition of Uterus: Diseases of Menstruation: Sterility: Lencorrhoea etc

Many of the patients who suffer from these conditions are now treated as day patients since the opening of the DBU, with the exception of certain patients having investigations for sterility eg by hysterosalpingogram. The consultants now wish to carry out this investigation as a 24 hour type of case (vide infra).

Abortions

The senior gynaecologist has suggested that these be performed as 24 hour cases. Patients unfit to go home at the end of this period would automatically be admitted as in-patients. (vide infra)

Abdominal pain:
Poisoning

The consultants have suggested that certain of these cases be treated as 24 hour cases within the DBU. (vide infra)

Early Complications of Surgical Procedures

Since readmission to hospital for complications following surgery involved intensive observation leading perhaps to further surgery, it seems unlikely that such patients would be considered suitable

for an overnight unit in spite of the fact that many of them spend only a short period in hospital.

Epistaxis

Although a certain amount of observation is involved, recurrence of the epistaxis should be quickly detected in the Day Bed Unit. There appears to be no reason why these patients should not be considered for overnight care or less within the Unit.

Hernia

Operations for hernia in children might also be considered for day or overnight care (none were recorded in the 1966 Print-Out. At that time hernia repair was not conducted on children).

2. The list of procedures suggested by the consultants in the hospital as being suitable for overnight care is now considered. Certain procedures have appeared in the list of cases already considered.

TABLE 45: TYPES OF CASE CONSIDERED SUITABLE BY CLINICAL STAFF AT VICTORIA HOSPITAL FOR 24 HOUR CARE BY NURSING SUPERVISION

Normal Nursing Supervision	Close Nursing Supervision
Collection of 24 hour urine specimens	Diabetics with severe hypoglycaemia
Septic fingers following incision	Overdosage of drugs (not seriously ill)
Elderly and other patients anaesthetised late in day	Indeterminate chest and abdominal pain (seen at night)
Minor procedures not entirely suitable for OP treatment	Head injury (momentarily unconscious)
Abortions: Therapeutic and Emergency	Dental Haemorrhages
Self inflicted wounds not requiring admission	Self poisoning - mild cases.
Fractures requiring limb elevations for 24 hours	
Hysterosalpingography	
Laparoscopy	
Plasmapheresis	
Paracentesis Uteri	

The procedures in the consultant list have been grouped for the purposes of this study into those requiring close observation and those requiring normal nursing supervision. This was done because the intensity of care required, nursing as well as medical, may constitute one of the main difficulties in establishing overnight care within the Day Bed Unit.

It might be argued that cases in the "close observation" group would not be so seriously ill as to require constant supervision. However, the need to keep such patients in hospital implies that some doubt concerning the seriousness of their condition must exist. The nature of the work of the Day Bed Unit at the present time should be kept in mind when considering these types of care. At any time during the day there may be a number of patients undergoing different procedures and at various stages in their treatment. The admission of a head injury for observation could throw undue strain on the nursing staff. Admission of such cases could of course be restricted to less busy times only eg 6 pm to 8 am, but in order to be effective such a rule would have to be applied strictly and in accordance with the nursing personnel available. Doubt must therefore exist as to the propriety of admitting those types of case requiring close nursing supervision to the unit as it is presently organised.

3. Finally opportunity was taken during studies of individual case records described in chapter (II.5) to examine the type and number of procedures potentially suitable for overnight care in the specialties of gynaecology and general surgery.

There were three procedures carried out in sufficient number to merit consideration

1. Evacuation of the uterus following incomplete abortion.
2. Laparoscopy
3. Biopsy of breast.

If therapeutic abortions were added to the first procedure the total number of cases involved would be considerable.

TABLE 46: NUMBER OF PATIENTS HAVING EVACUATION OF UTERUS LAPAROSCOPY AND BREAST BIOPSY BY DURATION IN HOSPITAL FOR SELECTED PERIODS, VICTORIA HOSPITAL KIRKCALDY

	Total Stay in Hospital (Nights)								
	1	2	3	4	5	6	7	9	TOTAL
Evacuation of Uterus April 1969	4	4	1	4	1	-	1	-	15
Laparoscopy April 1969	-	4	1	1	-	-	-	-	6
Breast Biopsy (Subsequently proved benign) January 1969	-	1	1	2	2	-	-	1	7

In the case of breast biopsy, one patient spent two nights in hospital prior to operation, two patients spent 3 nights, one patient 4 nights, and one patient 6 nights. In no instance was the patient admitted on the day prior to her operation.

These potential savings in bed days assumes that the cases recorded during the period studied were typical.

Conclusion

The types of case suggested as being suitable for one night stay or day care are as follows:-

Abortions: Therapeutic and Emergency

Hysterosalpingography

Paracentesis Uteri

Laparascopy

Plasmapheresis

Fractures requiring limb elevation for 24 hours

Septic fingers following incision

Collection of 24 hour urine specimens

In addition, the following should be considered:-

Benign Neoplasm of Breast

Redundant Prepuce and Phimosis

Hernia in children

Finally, patients meriting consideration might be those having established day procedures carried out, but who for clinical or social reasons should spend a longer period in hospital. These vulnerable patients have been discussed in previous chapters - the aged, those living alone and those debilitated following treatment and are included in the consultant list of potential 24 hour cases.

The question as to whether the procedures should be conducted as day cases or one-night stay cases would depend to a great extent on the practice of the surgeon. Whichever duration of stay is adopted it is assumed that a reasonable standard of post-operative

care is available at home as outlined in Chapter (II.6). An overnight system would certainly provide some flexibility - giving a type of care lying between that of day and full in-patient. Patients could be moved from day to overnight care with little difficulty. Thereafter, admission to an in-patient ward, if this proved necessary, would be facilitated, as there would exist greater forewarning of the move.

Footnote The material in this section was incorporated in a paper submitted to the South-Eastern Regional Hospital Board proposing that the day bed unit at Victoria Hospital, Kirkcaldy should be used to treat overnight cases in addition to day cases. The paper was accepted in principle and a pilot scheme inaugurated whereby one night in the week was reserved for overnight stay - mainly for gynaecology cases. Evaluation will be carried out after several months of trial.

CHAPTER III.2

OTHER POSSIBLE FUTURE DEVELOPMENTS

The Carrying out of More Major Procedures in Day Bed Units

The possibility of carrying out operations of greater severity in day bed units was considered. Surgeons including Farquharson, Dudley and Stephens, operated on inguinal hernia and varicose veins as day procedures, but it is clear that well organised post-operative care is essential. The co-operation of the family doctor is necessary and Stephens and Dudley went so far as to send members of their own surgical team to visit the patient at home. A satisfactory system of post-operative care therefore could be devised within the present organisation but some strain is likely to be thrown on the hospital and domiciliary health services. However, with the unified structure of health services under Area Health Boards shortly to be introduced, a system of care involving both hospital and domiciliary services should operate more easily.

An ideal system perhaps would be one where the family doctor worked from a health centre attached to a district general hospital which included day bed facilities. Liaison between the personnel thus brought together, hospital clinician and nurse, family doctor, district nurse and health visitor, would be greatly facilitated. In the event of a post-operative complication developing in a patient at home the district nurse could receive advice or summon aid directly from the hospital with the minimum delay. With the more severe type of surgery it would be necessary for the district nurse to visit frequently during the first 24-48 hours after operation. It would also be necessary to have a person living at home who could summon

assistance if necessary - again direct from the hospital in order to minimise delay. Finally, in order to evaluate the suitability of the home for this type of surgery assessment would require to be carried out by the district nurse service prior to acceptance of the case for day-care.

The General Practitioner in the Day Bed Unit

There is little doubt that many of the procedures now carried out by hospital clinicians could be carried out by general practitioners. For example, a general practitioner interested in gynaecology could carry out many of the D & C and cautery of cervix operations now done by consultants and registrars. Similarly, many of the minor orthopaedic operations could be carried out by a general practitioner under the supervision of the consultant staff. Many of the general surgical operations involving excision of superficial lesions are presently carried out by junior surgical staff and could be undertaken by general practitioners.

Location of the Day Bed Unit

The question as to whether a day bed unit could be located at some distance from a general hospital for example as part of a large health centre is of some relevance. Such a system might be satisfactory to deal with the relatively minor operations currently performed in day bed units, but the question of its economic desirability requires some consideration.

An eighteen bedded unit serves the needs of the large burgh of Kirkcaldy and the surrounding country - some 200,000 people in all. The most convenient site is clearly in association with the district general hospital with its nursing reserve, constantly available

medical staff and X-ray facilities. However, there are certain areas of the country with a scattered population and widely dispersed hospitals where a day bed unit associated with a health centre might be of great service to the community. Such areas might be the Islands and Highlands in Scotland and eastern parts of England - Lincolnshire and Norfolk. Gruer (1972) has demonstrated the saving in terms of cost and time to the Borders community where cottage hospitals are available for out-patient consultation, and clearly this saving would apply to patients requiring day bed care.

If the procedures were confined to selected minor types, if an adequate nursing staff was maintained and general practitioners were easily available then such a system would be viable. A small X-ray department would be necessary capable of taking chest and limb X-rays, but laboratory facilities could be employed at the nearest hospital. Light meals only are required so that catering would not be a serious problem. It is important to note that the Dawson Report (1921) described a system of community care whereby general practitioners, public health offices and district nurses worked from a health centre and within the centre was included a number of beds for the treatment of minor cases.

APPENDIX I

VICTORIA HOSPITAL, KIRKCALDY — DAY BED UNIT PATIENT RECORD SUMMARY SHEET — MEDICAL IN CONFIDENCE

Cols.

Class of card [1] 1

Surname [ ] 2-13

Initials [ ] 14-15

Hospital Case Reference Number [ ] 16-21

Date of Birth X. Not known [ ] 22-27

Sex 0. Not recorded 1. Male 2. Female [ ] 28

Marital Status 0. Not recorded 1. Married 2. Single 3. Widowed 4. Other [ ] 29

Attendant Living at Home 0. Not recorded 1. None 2. One or more [ ] 30

Area of Residence 0. Not recorded 1. Less than 2 miles 2. More than 2 miles [ ] 31

G.P.s Number [ ] 32-35

Date placed on waiting list [ ] 36-41

X. Not recorded/not on Waiting List

Number of Previous Attendances this illness X. Not recorded 0. None 9. 9 or more [ ] 42

Specialty 0. Not recorded 1. General Medicine 2. General Surgery 3. Orthopaedic Surgery 4. Urology 5. Gynaecology 6. Psychiatry 7. E.N.T. 8. Casualty 9. Other [ ] 43-44

Diagnosis [ ] 45-47

Operation X. Not recorded 0. No operation [ ] 48-50

Location of Principal Treatment 0. Not recorded 1. Bed 2. Treatment Room 3. Day Bed Theatre 4. Casualty Dept. 5. Casualty Theatre 6. Other Theatre 7. Other [ ] 51

Anaesthetic 0. Not recorded 1. Local 2. General 3. None [ ] 52

Specimens - Biochemistry [ ] 53

Bacteriology [ ] 54

Haematology [ ] 55

Morbid Anatomy [ ] 56

(X. Not recorded; 0. None; 1. Specimen sent)

Facilities Used - Main Meal [ ] 57

Bed [ ] 58

Rest Room [ ] 59

X-Ray [ ] 60

Other [ ] 61

(X. Not recorded; 0. None; 1. Facility used)

Serial Number [ ] 62-65

Operation [ ] 66 [ ] 67 [ ] 68 [ ] 69 [ ] 70

[ ] 71 [ ] 72 [ ] 73 [ ] 74 [ ] 75

[ ] 76 [ ] 77 [ ] 78 [ ] 79 [ ] 80

In col. 71 enter 5 if 0 in cols. 48-50
6 if X in cols. 48-50

Address _____

_____

_____

Cols.

Class of card [2] 1

Columns 2-28 as for Card 1

Admission

Date of Admission [ ] 29-34

Expected Time of Arrival X. Not applicable/recorded [ ] 36-38

Actual Time of Arrival [ ] 39-42

Transport 0. Not recorded 1. Foot 2. Car 3. Public Transport 4. Taxi 5. Ambulance 6. Other [ ] 43

Discharge

Time of Arrival at Test Room X. Not recorded [ ] 44-47

Transport: Time of Request X. Not applicable/recorded [ ] 48-51

Time of Departure X. Not recorded [ ] 52-55

Method 0. Not recorded 1. Foot 2. Car 3. Public Transport 4. Taxi 5. Ambulance 6. Other [ ] 56

Disposal

0. Not reported
1. Home (With no Out-Patient Appointment)
2. Home and Out-Patient Supervision
3. Other Hospital (excluding Mental)
4. Mental Hospital
5. Local Authority or Voluntary Home
6. Dead
7. Ward
8. Other [ ] 57

Columns 58-61 Blank

Serial Number [ ] 62-65

Name of G.P. _____

Address _____

_____

_____

_____

Supplementary Information

APPENDIX II

MEDIAN TIME ON WAITING LIST BY MONTH OF TREATMENT AT DAY BED UNIT, KIRKCALDY

UROLOGY JUNE 1968 - MAY 1969
GYNAECOLOGY NOV 1968 - MAY 1969

UROLOGY

Month	No of Patients	Median Time on WL (in weeks)
June 1968	22	13.2
July	16	4.5
August	27	4.5
September	29	8.8
October	34	6.9
November	28	10.0
December	37	7.0
January 1969	22	6.0
February	24	2.7
March	29	5.6
April	55	4.4
May	23	2.6

GYNAECOLOGY

Month	No of Patients	Median Time on WL (in weeks)
November 1968	16	16.5
December	40	3.3
January 1969	32	4.3
February	44	4.5
March	43	2.8
April	40	3.2
May	35	1.8

APPENDIX III

OPERATIONS & INVESTIGATIONS, DAY BED UNIT, VICTORIA HOSPITAL, KIRKCALDY

MAY 31, 1968 TO MAY 31, 1969

Operations/ Investigations	Male	Female	Total Male & Female No.	%
ECT	119	387	506	15.5
Cystoscopy and/or Diathermy of Bladder Urethroscopy	251	153	404	12.4
Exc Superficial Cyst	175	101	276	8.5
Fallopian Insufflation Av. Cervical Polyp Miomectomy D & C/C	-	248	248	7.6
Bowel Wash Out with X-Ray	108	128	236	7.2
Urethral Catheterisation	132	77	209	6.4
Maximum Histamine Test Meal	139	34	173	5.3
Proof Puncture of Nasal Antra	67	51	118	3.6
Secondary Treatment Wounds: Skin Graft	77	26	103	3.2
Manipulation Joint: Reduction dislocation	50	43	93	2.9
Bouginage (Urethra)	81	2	83	2.6
Abscess Incision	48	24	72	2.2
Observation/Rest	29	35	64	2.0
Sequestrectomy Exc. Exostosis Removal Screws: Pins etc Other Minor Ops. on Bone Op. Hallux Valgus Biopsy Joint Arthrotomy Aspiration Joint Amputation Finger " Toe Exc. Minor Lesion of Joint Incision Bursa Bursectomy	34	30	64	2.0

Operations/ Investigations	Male	Female	Total Male & Female No.	%
Lumbar Puncture	34	29	63	1.9
Op. on Tympanum " " Eustachian Tube Incision Peritonsillar Abscess Op. on Mastoid Antrum Other Ops. on Ext. Ear Other Ops. on Nose - (cautery septum) Incision Ext. Ear Removal FB Auditory Canal. Blepharoplasty Dental Extraction Surgical Removal Teeth Incision Salivary Gland Dilatation Duct of Salivary Gland	38	22	60	1.8
Change of Plaster Removal/Application Splints/Brace	41	18	59	1.8
Division of Tendon Carpal Tunnel Syndrome Tenectomy Exc. Lesion Muscle etc Repair Tendon	23	34	57	1.8
Removal Nail	29	22	51	1.6
Injection Varicose Vein	14	35	49	1.5
Closed Reduction Fracture	18	30	48	1.5
Manipulation Nasal Bones	35	8	43	1.3

Operation/ Investigations	Male	Female	Total Male & Female	
			No.	%
Exc. Minor Lesion of Tongue Exc. Callus/Corn Other Skin Lesion (scar etc) Biopsy Lymph Node Suture Superficial Wound Debridement Wound Biopsy Skin Implant Removal FB (superficial) Exc. External Anal Tags Preputiotomy	21	21	42	1.3
Sigmoidoscopy Removal Impacted Faeces Sphincter Stretching	20	13	33	1.0
IUD Vaginal Pessary Artificial Insemination	2	30	32	1.0
Sternal Marrow Puncture	10	19	29	0.9
Aspiration Hydrocoele	20	-	20	0.6
Injection into Nerve IVP Venography Injection (intramuscular) Injection (subcutaneous) Injection (Haemorrhoids) Paracentesis Injection (venous)	4	9	13	0.4
Stomach Wash Out EUA Varicotomy & Ligation Vein Ligation vein	6	7	13	0.4
TOTALS	1,625	1,636	3,261	100.0

APPENDIX IV

DURATION OF STAY BY PROCEDURE IN THE DAY BED UNIT, KIRKCALDY

YEAR ENDING 31 MAY 1969

Procedure	Stay in Unit (in hours)										Total (Excl no Record)	Mean Stay (Hours)	Median Stay (Hours)
	No Record	0-	1-	2-	3-	4-	5-	6-	7-	8-9			
Observation	5	13	20	11	7	4	2	0	0	2	59	2.28	1.85
Lumbar Puncture	1	0	2	1	5	21	19	0	0	3	62	5.24	5.13
Change of Plaster	1	0	5	18	15	11	4	3	2	0	58	3.64	3.43
Bowel Wash-Out (X-ray)	3	1	0	36	176	19	1	0	0	0	233	3.45	3.45
Sigmoidoscopy	0	12	12	4	4	1	0	0	0	0	33	1.59	1.42
Manipulation of Nose	0	0	6	11	19	6	0	1	0	0	43	3.18	3.26
Proof Puncture Sinus	0	0	3	54	43	10	8	0	0	0	118	3.21	3.06
Cystoscopy	3	14	15	62	239	55	12	2	1	0	400	3.39	3.46
Bouginage (urethra)	3	1	6	14	52	4	2	1	0	0	80	3.28	3.38
Sternal Puncture	0	3	10	10	1	2	1	1	0	1	29	2.57	2.20
Injection of Varicose Veins	0	19	18	10	2	0	0	0	0	0	49	1.40	1.33
D & C/C	7	1	3	2	78	128	27	2	0	0	241	4.23	4.29
Minor Gynae Ops (Other)	0	14	11	4	1	2	0	0	0	0	32	1.44	1.23
Minor Orthopaedic	3	1	7	13	13	13	7	3	2	2	61	3.89	3.77
Manipulation Joints	1	1	13	18	27	28	7	6	2	0	92	3.62	3.54
Reduction of Fractures	4	5	6	10	11	9	2	0	1	0	44	3.05	3.14
Tendon Operations	0	1	4	7	14	19	7	3	2	0	57	4.06	4.16
Superficial Cyst Excn	4	72	118	52	19	5	2	3	0	0	272	1.70	1.53
Other Superficial Lesion Excision	1	4	15	8	2	4	6	2	0	0	41	2.82	2.25
Nail Removal	2	5	16	19	7	1	0	1	0	0	49	2.23	2.21
Abscess Incision	1	5	18	18	17	7	5	1	0	0	71	2.81	2.72
Catheter Change	4	71	98	30	5	0	0	0	0	0	204	1.35	1.31
ECT	13	4	104	323	57	5	0	0	0	0	494	2.40	2.43
Wound Treatment	5	11	17	18	24	14	8	4	1	0	97	3.10	3.13
MHTM (Gastric T Meal)	0	2	2	4	154	11	0	0	0	0	173	3.48	3.51
Hydrocele Tap	0	9	6	4	0	1	0	0	0	0	20	1.40	1.25
Injections	0	1	3	2	2	2	2	1	0	0	13	3.35	3.50
Minor Oral Procedures	1	8	4	22	17	7	0	1	0	0	59	2.75	2.82
Other	3	2	3	3	0	2	0	0	0	0	11	2.00	2.00
TOTAL	65	280	545	788	1011	381	122	43	14	8	3195		

Patients with stay not recorded were excluded from the calculations.
Four patients with a recorded stay of 10 hours or more were also excluded because of probable recording error.

APPENDIX V

SCHEDULE OF MINOR OPERATIONS ACCORDING TO THE NATIONAL HEALTH SERVICE (DAY BED ACCOMMODATION IN HOSPITALS, ETC) REGULATIONS, 1953

GENERAL SURGICAL: UROLOGY: PLASTIC

Abscess
Amputation of fingers or toes
Any condition treated by surgical diathermy under general anaesthesia, other than mouth, or tongue, or bladder
Blood transfusion (grouping and expenses of donor extra)
Cystoscopy
Dilatation of anus for fissure
Dilatation of rectal stricture
Dilatation of urethra
Division of fibrous anus
Examination under anaesthetic
Hydrocele (injection)
Implantation of radium or radon seeds for treatment of skin tunour
Induction of pneumotharax
Ischiorectal abscess
Lupus
Naevi, except in severe cases
Plastic operations not requiring a tube graft and of a simple kind
Pylegraphy (not including services of radiologist)
Removal of anal warts and anal papillae
Removal of needles from hand or foot or elsewhere
Rodent ulcer not involving bone or eye
Sebaceous cysts
Skin grafting
Tuberculous caseous glands of neck (curetting)
Varicocele

ORTHOPAEDIC

Amputations of toes and fingers
Application of plaster-of-paris casts with or without anaesthesia
Hammer toe
Manipulation of smaller joints
Removal of exostoses
Removal of small bursae
Simple manipulation or tenotomy and plasters

OROSURGICAL

Alveolectomies
Apicectomies
Extraction of teeth (multiple)
Removal of small tumours of dental origin
Simple fractures of the maxilla and mandible
Uncomplicated impacted or buried teeth

GYNAECOLOGICAL

Vulvo-Vaginal:
Cauterisation
Colpotomy
Cysts or simple tumours of the vulva and vagina
Relief of atresia vagina
Removal of caruncle
Urethral prolapse

Uterus and Adnexa:
Induction of radiation menopause
Curettage
Cervix
Biopsy of endometrium
Dilatation
Insufflation
Removal of polypi

OPHTHALMIC

Canaliculus and lachrymal duct exploration
Cauterisation of corneal ulcer
Chalazion
Ectropion
Entropion
Excision of pterygium
Peritomy
Removal of superficial dermoid
Removal of foreign body embedded in cornea
Suturing lid wounds

EAR, NOSE AND THROAT

Diagnostic peroral endoscopy
Opening of quinsies
Myringotomy
Reduction of recent nasal fractures
Simple removal of nasal polypi

APPENDIX VI

TYPES OF MINOR PROCEDURE WITH DIAGNOSTIC CATEGORIES PERFORMED AT VICTORIA HOSPITAL, KIRKCALDY DURING SELECTED PERIODS (compiled from the list of minor operations defined in the National Health (Day Bed Accommodation - Hospitals) Regulations 1973 - See Appendix V) Procedures subsequently classed as minor but not listed in the regulations are indicated.*

GYNAECOLOGY APRIL 1968 AND APRIL 1969

OPERATION

Vulvo-Vaginal and Cervix

Cauterisation
Removal of Caruncle
Excision of Cyst
Biopsy
Dilatation
Removal of Polypi

Uterus

Curettage
Insufflation of tubes
*Hysterosalpingography
*Examination of Pelvic Organs under General Anaesthesia

Diagnostic Category

Uterine Dysfunction
Infertility
Cervical Erosion/polyp
Pelvic Pain
Caruncle
Vulval cyst
Family Planning
Uterine Displacement
Investigation of Fistula

UROLOGY JANUARY 1968 AND JANUARY 1969

OPERATION

Endoscopy/Bouginage

Cystoscopy
Dilatation of urethra
Pyelography (retrograde)
*Diathermy to growth of bladder (whether first or subsequent time)

Diagnostic Category

Bladder/Prostate Disease
Urethral Stricture
Urinary Tract Infection
Hydronephrosis/ Hydroureter;
Enuresis

GENERAL SURGERY JANUARY 1968 AND JANUARY 1969

OPERATION

Incision Abscess (incl ischio-rectal)
Cystoscopy
Excision Naevus/Sebaceous Cyst
Biopsy Superficial Cyst/gland
*Avulsion of Nail
*Division of Frenulum Lingui
*Sigmoidoscopy

Diagnostic Category

Prostatic Hypertrophy
Rectal Polyp: Proctocolitis: Diverticulitis: Ulcerative colitis (sigmoidoscopy)
Bladder Growth
- otherwise - as indicated in the operation description

APPENDIX VII

KDBU FOLLOW-UP SURVEY

MARITAL STATUS BY SEX AND AGE

Age (Years)	Males				Females				Total Males & Females	
	Single	Married	Widowed	Total	Single	Married	Widowed	Total		
16-19	8	-	-	8	4	1	-	5	13	4%
20-24	10	21	2	33	10	70	3	83	116	36%
45-64	2	67	2	71	7	47	9	63	134	41%
65+	2	28	4	34	6	11	10	27	61	19%
Total	22	116	8	146	27	129	22	178	324	100%

Age Not Recorded - 1 Single Male Patient

Marital State Not Recorded - 2 Male Patients aged 65+ years.

SOCIAL CLASS BY SEX (using the Registrar General's Classification of Occupations, 1966)

Sex	Social Class							Total
	I	II	III (Non-manual)	III (Manual)	IV	V	Other/Not Applic/No Answer*	
Male	7	16	11	47	30	9	29	149
Female	8	21	14	59	29	6	41	178
Total	15	37	25	106	59	15	70	327

* Includes occupation recorded as "retired"; "armed Services"; "not working"; "redundant"; "student".

Domiciliary Area

113 patients (35%) lived within the Burgh of Kirkcaldy and 214 (65%) lived outwith the Burgh. This distribution is similar to that found in the main survey of patients for the year ending May 31, 1967, in which the ratio of "local": "country" patients was approximately 1:2.

APPENDIX VIII

KDBU FOLLOW-UP SURVEY

SPECIALTY OF TREATMENT

Medicine	Surgery	Orthopaedics	Urology	Gynaecology	ENT	Total
18	105	29	94	70	11	327

NUMBER AND TYPES OF PROCEDURE

Procedures	Number	Procedures	Number
Observation	1	Intra-Uterine Device	1
Lumbar Puncture	6	Minor Bone and Joint Surgery	3
Change of POP	7	Reduction Fractures etc	5
Bowel Wash-out with X-ray	50	Tendon Opns	4
Sigmoidoscopy	3	Excision Cysts	30
Manipulation of Nose	6	Excision other minor lesions	4
Proof Puncture of Sinus	4	Removal nail	4
Cystoscopy	74	Catheter (Urethral)	8
Bouginage	15	Wound Treatment and Grafts	8
Injection Variscose Veins	10	Gastric Test Meal	11
D & C/C	68	Hydrocoele Aspiration	2
		Injections	3
		Total	327

ANAESTHESIA

194 patients had general anaesthesia and 54 local anaesthesia while 78 patients required none. In one patient the type of anaesthetic was not recorded.

APPENDIX IX

KDBU FOLLOW-UP SURVEY

NUMBER OF PATIENTS WORRIED ABOUT AFTER-EFFECTS

	Number of Patients Reporting After-Effects				
	Some Worry	Considerable Worry	No Worry	No Answer	Total
Number	36	4	142	35	217
Per Cent	16.6	1.8	65.4	16.1	100.0

PERCENTAGE DISTRIBUTION OF PATIENTS HAVING INFORMATION ABOUT THE DAY BED UNIT PRIOR TO ENTRY, BY SOCIAL CLASS (REGISTRAR GENERAL'S CLASSIFICATION OF OCCUPATIONS, 1966)

Patients having Information on the Unit	Social Class						*Other Not Applic/ No Answer	Total
	I	II	III (Non-Manual)	III (Manual)	IV	V		
Yes	6.7	13.9	28.0	27.4	33.9	-	23.2	24.1
No	93.3	86.1	72.0	72.6	66.1	100.0	76.8	75.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	15	36	25	106	59	14	69	324

Excluded from Table - 1 patient (RG ClassII) - No answer to question re Information on the Unit.

2 patients - previously attended the Unit.

* Includes occupation recorded as "retired"; "armed services"; "not working"; "redundant"; "student".

APPENDIX X

GYNAECOLOGY FOLLOW-UP SURVEY

The number of patients given questionnaires was 218. The number of valid questionnaires completed was 210, giving a response of 96.3%.

The Survey Population

Age Distribution

Under 20 years	20-29	30-39	40-49	50-59	No Ans	Total
5	104	75	15	8	3	210

Marital Status

	Married	Widowed Divorced Separated	Single	Total
Number	183	10	17	210
Per Cent	87.1%	4.8%	8.1%	100%

SOCIAL CLASS (REGISTRAR GENERAL'S CLASSIFICATION OF OCCUPATIONS, 1966)

	Social Classification							Total
	I	II	III (Non-Manual)	III (Manual)	IV	V	Other/Not Applicable/ No Answer *	
Number	18	31	27	78	29	7	20	210
Per Cent	9.0	14.8	12.9	37.1	13.8	3.3	9.6	100.0

* Includes occupation recorded as "armed services": "student": "unemployed": "retired": "redundant".

APPENDIX XI

GYNAECOLOGY FOLLOW-UP SURVEY

Area of Residence

	City of Edinburgh	East Lothian	Midlothian	West Lothian	Fife Kinross Clackmannan	Selkirk Roxburgh Berwick Peebles	Other	Total
Number	121	13	49	6	13	5	3	210
Per Cent	57.6	6.2	23.3	2.9	6.2	2.4	1.4	100.0

More than half the patients were resident within the City of Edinburgh and just under one third resident within the counties adjoining the city (ie the Lothian Counties).

Of the remainder, over 8% were resident at some distance, either in the Border Counties or in Fife, Kinross or Clackmannan. The journey home for these patients following treatment must therefore have involved a travelling time of at least $\frac{3}{4}$ of an hour.

APPENDIX XII

GYNAECOLOGY FOLLOW-UP SURVEY

Treatment Carried Out

The treatment given to patients in the Gynaecology Attitude Study may be summarised as follows:-

Group 1	Group 2	Group 3	Total
Manipulative	Curetting or Diathermising	Hysterosalpingogram	
19 (9%)	130 (62%)	61 (29%)	210 (100%)

Group 1 included patients who received manipulative treatment as for correction of uterine displacement and insertion of pessaries.

Group 2 included D & C/cautery of cervix, vagina or vulval region.

Group 3 included hysterosalpingogram, but many patients in addition also had a biopsy taken or cervical cautery.

ANAESTHESIA

All the patients were given a general anaesthetic.

APPENDIX XIII

GYNAECOLOGY FOLLOW-UP SURVEY

AFTER-EFFECTS OF TREATMENT

After-effects	No of Patients	Percent of Total Survey Patients	After-effects	No of Patients	Percent of Total Survey Patients
Bleeding	117	55.7	Frequency Passing Urine	31	4.8
Discharge	79	37.6	Nausea	16	7.6
Pain - Back	48	22.9	Vomiting	6	2.9
Stomach	69	32.9	Dizziness	29	13.8
Heart	49	23.3	Faintness	11	5.2
Passing Urine	17	8.1	Cough	4	1.9
Throat	14	6.7	Generally Unwell	97	46.2
Chest	4	1.9	Other after-effects	2	1.0
Other pain	4	1.9	No after effects	8	3.8
Constipation (2 days or more)	18	8.6	No answer	4	1.9
TOTAL SURVEY PATIENTS 210					

NUMBER OF PATIENTS WORRIED ABOUT AFTER-EFFECTS

	Number of Patients Reporting After-Effects				
	Some Worry	Considerable Worry	No Worry	No Answer	Total
Number	32	5	145	20	202
Per Cent	15.8	2.5	71.8	9.9	100.0

APPENDIX XIV

GYNAECOLOGY FOLLOW-UP SURVEY

PATIENTS WORRIED ABOUT AFTER-EFFECTS: ACTION TAKEN

Action Taken	Whether Worried about After-effects			
	No Worry		Worried	
	Number of Patients	% of Total Patients with no Worry	Number of Patients	% of Total Patients with Worry
Nothing	82	56.6	12	32.4
Contacted GP	6	4.1	11	29.7
Contacted Relative	2	1.4	4	10.8
Contacted Hospital	1	0.7	1	2.7
Took Aspirin	22	15.2	8	21.6
Took Other Tablets/ Medicine	20	13.8	4	10.8
Other Action	13	9.0	2	5.4
No Answer	5	3.5	1	2.7
Total Patients (non-additive)	145		37	

Not included: 20 patients who did not answer whether they worried about after-effects.

DESIRE TO REMAIN LONGER IN HOSPITAL RELATED TO AMOUNT OF DISCOMFORT EXPERIENCED DURING JOURNEY HOME

Desire to Remain in Hospital for Longer Period	Discomfort During Journey Home				Total
	No Discomfort	Some Discomfort	Considerable Discomfort	No Answer	
No	113	71	8	2	194
Yes	5	8	3	-	16
Total Patients	118	79	11	2	210

APPENDIX XV

DAY BED PATIENT SURVEY

THE DAY BED UNIT

VICTORIA HOSPITAL

KIRKCALDY

THE INVESTIGATION

It is hoped that information obtained from this survey will enable us to improve our present service and plan for the future but we can only do this with your co-operation. As one of the first patients in the Unit your experience and frank opinions are of great value to us. Your help will indeed be appreciated both by us and by future patients in our care.

NOTES TO HELP YOU COMPLETE THE QUESTIONNAIRE

Most questions have been given a range of possible answers and to the right of each possible answer is a number. You should complete each question by ringing the number opposite the answer which applies to you. For example: in Question 1 if you considered your wait for admission to have been reasonable you would circle 1. Similarly, in Question 2 if you were notified that you were to go to the Unit less than 2 days beforehand you would record: Less than 2 days .....0. We have not been able to provide all possible answers to some questions and here we have usually used 'other (specify)'. Thus in Question 4 (ii) if you felt that dressing facilities were unsatisfactory for some reason other than the lack of privacy, you should circle 1 and write your reason(s) in the space provided below. If you have any other comments you would like to make about the day unit that we haven't covered in the questionnaire please use the space at the end.

FOR OFFICE USE ONLY

NAME _____

ADDRESS _____

_____

_____

Serial number: 1 [ ] 2 [ ] 3 [ ] 4 [ ]

Individual survey number: 5 [ ] 6 [ ] 7 [ ]

P.1.No.

For office use only

Please read the notes at the front of this questionnaire before starting to fill it in.

1. Did you consider your wait for admission to hospital to have been:- 8 [ ]

Short	 0
Reasonable	 1
Long	 2

2. How much warning did the hospital give you that you were to go into the day care unit? 9 [ ]

Less than 2 days	 0
2 days - 1 week	 1
1 - 2 weeks	 2
More than 2 weeks	 3

3. (i) How did you travel to hospital? 10 [ ]

On foot	 0
By private car	 1
By taxi	 2
By public transport	 3
By ambulance	 4
Other means (please state)	 5

If you travelled by ambulance to the hospital -

(ii) Did it arrive at your home at the arranged time?

11

Yes 0
No 1

Did not travel by ambulance X

4. (i) During your stay in the day care unit did you find any of the following things disturbing or unsatisfactory?

12

Noise 0
Treatment being given to other patients 1
Dressing or undressing facilities 2
Feeding arrangements 3
None of the above worried me 4

(ii) What was it about the dressing and undressing facilities that troubled you?

13

Too little privacy 0
Other reasons (please state below) 1

Dressing facilities were satisfactory X

(iii) What was it about the feeding arrangements that troubled you? (Please describe below)

14

Feeding arrangements were satisfactory 0

5. (i) Did anyone tell you anything about the day bed unit before you went in?

15

Yes 0
No 1

(ii) Who talked to you about the unit

16

Hospital doctor 1
G.P. 2
District Nurse 3
Friend, neighbour relative 4
Other (specify) 5

No-one 0

6. Did you have any difficulty finding the unit when you arrived at the hospital?

Yes - a lot	.....	1
Yes - some	.....	2
No - no difficulty	.....	0

17 [ ]

7. How long were you in the unit recovering after your treatment?

Less than ½ hour	.....	0
½ hour - 1 hour	.....	1
1 hour - 2 hours	.....	2
More than 2 hours	.....	3

18 [ ]

8. Would you have liked to have had a longer time to recover in hospital after your treatment?

Yes	.....	0
No	.....	1

19 [ ]

If yes - why would you have liked a longer time?

20 [ ]

9. (i) How did you travel home from hospital after being discharged?

On foot	.....	0
By private car	.....	1
By taxi	.....	2
By public transport	.....	3
By ambulance	.....	4
Other (please state)	.....	5

21 [ ]

(ii) Did the hospital make your travelling arrangements home for you?

Yes	.....	0
No	.....	1
Don't know	.....	X

22 [ ]

(iii) How long did you have to wait after you knew you could go home before your transport home arrived?

Did not have to wait	.....	0
Up to 10 minutes	.....	1
10 mins to ½ hour	.....	2
½ hour - 1 hour	.....	3
Over an hour	.....	4
Made my own arrangements to travel home	.....	X

23 [ ]

P.1.No.

(iv) How long did you spend travelling home after you were discharged?

24

Less than ½ hour	 0
½ hour - ¾ hour	 1
¾ hour - 1 hour	 2
More than 1 hour	 3

(v) During your journey home did you have any pain or discomfort or feel unwell?

25

Yes, a lot	 0
Yes, a little	 1
No, none	 2

10. (i) Did you have any of the following or any other after effects during the 48 hours after you returned home?

26

(a) Bleeding	 1
Discharge	 2
Pain - back	 3
- stomach	 4
- headache	 5
- passing urine	 6
- sore throat	 7
- chest	 8
Other pain (please state)	 9

(a) (contd)

None of the above after effects	 X
No after effects of any kind	 0

26 (contd)

(b) Constipation lasting more than 2 days 1
Frequency in passing urine 2
Nausea 3
Vomiting 4
Dizziness 5
Faintness 6
Cough 7
Generally feeling unwell, exhausted, tired 8
Other (please state) 9

27

None of the above after effects	 X
No after effects of any kind	 0

(ii) What did you do about these after effects?

28

Nothing	0
Contacted own local doctor	1
Contacted district nurse	2
Contacted relative	3
Contacted friend	4
Contacted hospital	5
Took aspirin	6
Took other tablets or medicine (please state)	7
Other (please state)	8
Had no after effects	X

(iii) Did these after effects worry you at all?

29

Yes - worried me considerably	1
Yes - worried me a little	2
No - did not worry me at all	0
Other (please state)	3

(iv) Did anyone discuss possible after effects of your treatment with you before you left the day unit?

30

Yes	0
No	1

11. (i) How soon after your treatment do you have an appointment to return to the unit for a check up or for further treatment?

31

Return appointment within 1 week	1
Return appointment within 1 - 2 weeks	2
Return appointment within 3 - 4 weeks	3
Return appointment more than 4 weeks after treatment	4
Other (please state)	5
No appointment to return required	0

(ii) How soon after your return home did you see or will you be seeing your family doctor about your treatment at the unit?

32

The same day	 1
The day after returning home	 2
2 days - 1 week after return home	 3
Between 1 - 2 weeks after return home	 4
More than 2 weeks after return home	 5
Did not, will not see him about my treatment at all	 0

12. How soon after your return home did you see your district nurse or health visitor concerning your treatment at the unit?

33

Saw her the same day	 1
Saw her the day after returning home	 2
Saw her 2 days - 1 week after return home	 3
Saw her between 1 - 2 weeks after return home	 4
Saw her more than 2 weeks after return home	 5
Did not see her about my treatment at all	 0

13. (i) Did your discharge home on the same day as the operation/treatment cause any difficulty in your domestic arrangements?

34

No difficulty	 0
Some difficulty	 1
Serious difficulty	 2

(ii) What kind of difficulties did you have? (please state)

35

No difficulties	 0

(iii) Did your discharge home on the same day as the operation/ treatment benefit your domestic arrangements in any way?

36

Yes - considerably	 1
Yes - somewhat	 2
No - not at all	 0
Other (please state)	 3

(iv) In what ways was it a help to you? (please state)

37

Did not benefit my domestic arrangements 0

14. (i) Did any problems arise during your stay in hospital?

38

No 0
Yes (please state) 1

(ii) Did any other problems arise after your return home?

39

No 0
Yes (please state) 1

(iii) How long was it after your treatment before you returned to paid employment?

40

Returned same day 1
Returned day after treatment 2
Returned 2 days after treatment 3
Returned 3 - 6 days after treatment 4
Returned 1 - 2 weeks after treatment 5
Returned more than 2 weeks after treatment 6
Have not yet returned to work 7
Other (please state) 8

Not in paid employment 0

(iv) How long was it after your treatment before you undertook full domestic duties?

41

Returned same day	1
Returned day after treatment	2
Returned 2 days after treatment	3
Returned 3 - 6 days after treatment	4
Returned 1 - 2 weeks after treatment	5
Returned more than 2 weeks after treatment	6
Have not yet returned to domestic duties	7
Other (please state)	8

15. (i) Have you ever been treated in an ordinary hospital ward as an adult before going to the day bed unit?

42

Yes	0
No	1

(ii) If you needed to have a similar operation to the one you have just had and could choose between the day bed unit and an ordinary hospital ward, which would you prefer?

43

Day bed unit	0
Hospital ward	1
No preference	2
Other (please state)	3

(iii) Why would you prefer a day bed unit?

44

Shorter delay in waiting list	0
Shorter stay in hospital	1
Knowing when you would be discharged home	2
WHAT ELSE? (please state)	3
Would prefer ordinary hospital ward	X

(iv) Why would you prefer an ordinary hospital ward?

45

Rest from home routine	0
Longer period recuperation	1
Made less work for family	2
WHAT ELSE (please state)	3
Would prefer day bed unit	X

It would greatly help us, if you would tell us a little more about yourself, so that we may better appreciate how patients in varying circumstances can benefit from this kind of care.

1. Your sex:-

46

Male	0
Female	1

2. Your marital status:-

47

Single	0
Married	1
Widowed, divorced separated	2

3. (i) How many children do you have living at home at the moment

48

None	0
1	1
2	2
3	3
4 or more	4

(ii) How many of the children at home are less than 14 years old?

49

_____ children

4. (i) Do you have to look after any other family members at home apart from the children?

50

Yes	0
No	1

(ii) For whom are you responsible?

51 [ ]

5. Do you live in -

(i) Accommodation with own bath 1
Accommodation with shared bath 2
Accommodation with no bath 3

52 [ ]

Do you live in -

(ii) Accommodation with own W.C. 1
Accommodation with shared W.C. 2

53 [ ]

(iii) Are the following - W.C., bath, kitchen, bedroom, living accommodation - or any of them

On the same level 0
Separated by one flight of stairs 1
Separated by two flights of stairs 2
Separated by more than two flights of stairs 3

54 [ ]

(iv) If you live in a flat, does your block have a lift?

Yes 0
No 1

Do not live in block of flats 2

55 [ ]

6. Do you have regular paid domestic help? (including Home Helps)

Yes 0
No 1

56 [ ]

7. (i) What kind of work do you do <u>at the moment</u>? (Please say whether <u>part-time</u>, whether self-employed or employee and describe as fully as possible).

Not in paid employment because:

Housewife	 7
Retired	 8
Other (please state)	 9

57

(ii) If you are working part-time, are unemployed or retired, what was your last <u>full-time</u> job. (Please describe as fully as possible).

Never been in full-time paid employment	 0

58

8. <u>If you are a married woman</u>

What does your husband do for a living? (Please describe as fully as possible giving grade of employment if known)

59

9. If you have any other comments to make about the day care unit we should be grateful to have them. Please use the space beneath and over the page.

May we thank you for your help in this research.

HOSPITAL RECORD DATA

A. Age

Year of birth
Not known XX

60 61

B. Attendant at Home

None	0
1 or more	1
Not recorded	X

62

C. Area of residence

Less than 2 miles	1
More than 2 miles	2
Not recorded	X

63

D. G.P. Residence

Code first 2 figures of G.P.s number ref. 0401 code Col. 55 0
Col. 56 4

64 65

Not recorded XX

E. Duration of Waiting List

Immediate admission		1 > 3 months	5
to Day Unit	0	3 > 6 months	6
1-6 days	1	6 > 9 months	7
7-13 days	2	9 >12 months	8
14-20 days	3	1 year or more	9
21-27 days	4	Not recorded	X

66

F. Number of Previous Attendances this illness

X = not recorded: 0 = None
9 = 9 or more.

67

G. Specialty

General Medicine	1
General Surgery	2
Orthopaedic Surgery	3
Urology	4
Gynaecology	5
Psychiatry	6
E.N.T.	7
Casualty	8
Other	9
Not Recorded	X

68

H. Diagnosis _____

_____

I. Type of Operation

Not recorded XXX
None 000

69 70 71

J. Place of Treatment

Bed	1	Casualty Theatre	5
Treatment Room	2	Other Theatre	6
Day Bed Theatre	3	Other	7
Casualty Deparment	4	Not Recorded	X

72

K. Anaesthetic

Local 1
General 2
None 0
Not Recorded X

73

L. Time Patient Arrival

Early/on time 0
0- 9 minutes late 1
10-19 minutes late 2
20-29 minutes late 3
30-59 minutes late 4
1 hour or more late 5
Not recorded X

74

M. Means Transport to Unit

Foot 1
Car 2
Public Transport 3
Taxi 4
Ambulance 5
Other 6
Not Recorded X

75

N. Duration wait transport Home

No waiting 0
0- 9 minutes 1
10-19 minutes 2
20-29 minutes 3
30-59 minutes 4
60-89 minutes 5
90-119 minutes 6
120 minutes or more 7
Not recorded X

76

O. Means Transport Home

Foot	1	Ambulance	5
Car	2	Other	6
Public Transport	3		
Taxi	4	Not recorded	X

77 [ ]

P. Consultant

Not Recorded XX

78 79 [ ][ ]

Q. Survey identification number

80 [ ]

APPENDIX XVI

"MINOR CASE" RECORD SHEET

NAME _____

ADDRESS _____ 1-2 ☐☐

_____

CASE NO. _____ 3-8 ☐☐☐☐☐☐

YEAR OF BIRTH _____ 9-10 ☐☐

SEX 1. Male 2. Female _____ 11 ☐

MARITAL 1. Married 2. Single 3. Widow
4. Separated or Divorced 12 ☐

OCCUPATION. Patient _____ 13 ☐

OCCUPATION. Husband
(if applicable) _____ 14 ☐

DATE OF ADMISSION _____)
) 15 ☐
DATE OF DISCHARGE _____)

DIAGNOSIS (IN FULL) _____ 16-17 ☐☐

_____

SOCIAL INFORMATION _____

_____ 18 ☐

_____

_____

_____ 19 ☐

OPERATION/INVESTIGATION _____
(In full)

_____ 20-21 ☐☐

CONSULTING HOSPITAL DOCTOR: Name _____ 22-23 ☐☐
Grade 1. Consultant
2. Non-Consultant 24 ☐

OPERATOR: Name _____ 25–26 ☐☐

Grade 1. Consultant
2. Non-Consultant 27 ☐

---

1. First Treatment 2. Repeat 28 ☐

Duration of WL 0 Immediate 1. 1–13 days
2. 14–27 days 3. 1<3 months
4. 3<6 months 5. 6<12 months 29 ☐
6. 12 months or more
X. Not recorded

Unit. 0 Day Bed Unit 6. IP Surgical Ward
1. Day Patient Surgical Ward 7. " Urology "
2. " " Urology " 8. " Gyn "
3. " " Gyn " 30 ☐

Source: 1. Emergency 2. WL 3. Transfer from Other Spec
4. Transfer from other hospital 31 ☐

Discharge: 1. Home 2. Other Hosp (NHS) 3. LA Care
4. Other 5. Transfer to other specialty (same Hosp) 32 ☐
6. Died 7. Irregular (Self Discharge etc)

Serial Number _____ 33–35 ☐☐☐

BIBLIOGRAPHY

Aldridge, L W (1965). Brit med J i, 183.

Asher, R A J (1944). Brit med J ii, 967.

Backett, E M et al (1966) - Problems and Progress in Medical Care, Second Series: Nuffield Provincial Hospitals Trust: Oxford University Press.

Bateman, P (1966). Nursing Times, 21 81.

Berrill, T H (1972). Brit med J, 4, 348.

Blodgett, J B, Beattie, E J (1946). Surg Gynec Obstet, 82, 485.

Boldt, H J (1907). NY med J 85, 145.

Braungardt C D
Kaufman R H
Franklin R R
(1963) Am J Obst & Gynec, 86, 151.

British Medical Journal (1948) Editorial ii, 1026.

Brotherston, J H F (1963). Medical Care, 1, 142 and 225.

Brown, F M (1964). Nursing Times, 60, 696.

Burch, J C, Bradley C F (1947). Ann Surg 125, 768.

Butterfield, J, Wadsworth M (1966) - Problems and Progress in Medical Care Second Series: Nuffield Provincial Hospitals Trust: Oxford University Press.

Calnan, J, Martin P (1971) Brit med J, 4, 92

Campbell, R (1909). Brit med J, ii, 754.

Campbell, R C, Dudley H A F (1964). Lancet, ii, 403.

Caridis, D T, Matheson, N A (1964). Lancet, ii, 1387.

Cartwright, A (1964). Human Relations and Hospital Care. London Routledge and Kegan Paul. (Reports of the Institute of Community Studies).

Cohen, D D, Dillon J B (1966). J Amer Med Assoc, 196, 1114.

Craig, G A (1970). Brit med J, ii, 786.

Crombie, D L, Cross K W (1959). Medical Press 242; 316, 340.

Crosby (1967). Medical Economics, Oradell, N J, 65.

Cullen, B E, (1947) J. Canad. Med. Ass, 57, 257

Davenport, H T, Shah, C P, Robinson, G C (1971). CMAJ, 105, 498.

Dawson Report (1920). The Future Provision of Medical and Allied Services. London HMSO.

Dean, D, Wilkinson, B R (1969). Brit med J, i, 176.

de Bakey, M E (1954). Int Abstr Surg, 98, 1.

Decenzo, J A, Cavanagh, D (1967). Am J Obst & Gynec, 97, 17.

de Soldenhoff (1948). Lancet, ii, 961.

Donald (1964). Meeting on Out-Patient Surgery: Scottish Home and Health Dept, Edinburgh.

Doran, F S A (1969). Symposium on Short Stay Surgery: Birmingham Regional Hospital Board.

Dudley, H A F (1966). Conference on Day Surgery. Oxford Regional Hospital Board.

Dunlop, D M (1949). Edinburgh med J, 56, 146.

Edington, G H (1909). Brit med J ii 754.

Farquharson, E L (1955). Lancet, ii, 517.

Follis, P (1969). Pulse, 18, 4.

Forsyth, G, Logan, R F L (1968). Gateway or Dividing Line Nuffield Provincial Hospitals Trust: Oxford University Press.

Fullerton, A (1913). Brit med J, i, 470.

Goodall, J W D (1951). Lancet, i, 43.

Gruer, R (1972). Scottish Health Service Study 23 Scottish Home and Health Dept.

Hall, E H (1969). Nursing Times 462.

Hartog, C (1909). Berl Klin Wschr 46, 492.

Heasman, M A (1964). Lancet, iii, 539.

Hockey, L (1969). Brit med J, ii, 169.

Hutchison, A F and Kane, J (1967). District Nursing, 10, 145.

Israel, S L, Mazer, C (1938). Amer J Obst & Gynec 36, 445.

Kelly, H A (1925). Am J Obst & Gynec, 9, 78.

Kiloh, L G (1968). Brit med J, iv, 813.

Kummell, H (1908). Zbl Gynak, 32, 1233.

Lambertsen, E C (1969). Modern Hospital 113. 140.

Lancet (1947). Editorial, ii, 427.

Lancet (1951). Editorial, i, 95.

Lawrie, R (1969). Brit med J, ii, 186.

Lawrie, R (1964). Lancet, iv, 1289.

Lawther, A (1967). The Hospital February p 47.
Leithauser, D J, Bergo H L (1941) Arch. Surg. 42, 1086
Leithauser, D J (1946). Early Ambulation and Related Procedures in Surgical Management. Springfield, Ill, and Oxford.

Levy, M L, and Coakley, C S (1968). Southern med J, 61, 995.

Littlepage, B N C, Daniel, D G, Ahmad, S, and Turnbull, A C (1969), J Obst and Gynec Brit Comm 76, 163.

Lockwood, E (1970). Health Bull xx viii, 2, 75.

Mackintosh, J M, McKeown T and Garratt, F N (1961). Lancet ii, 815.

Martin, M and Wild, R (1967). New Society 9, 920.

Mengert, W F and Slate, W G (1960). Am J Obst & Gynec, 79, 727.

Mikulicz - Radecki (1926). F Deutsche med Wchnschr 52: 2074.

Mills, W (1959). Brit med J, 2, 1254.

Morris, D, Ward, A W M and Handyside A J (1968). Lencet, i, 681.

Nelson, H (1944). Arch Surg 49, 1.

Nicoll, J H (1909). Brit med J, ii, 753.

Nicoll, J H (1913). Brit med J, i, 384.

Nixon, H H (1967) - Conference on Out Patient Surgery: Ministry of Health.

Palumbo, L T, Paul, R E, Emery, F B, (1952). Arch Surg, 64, 384.

Palumbo, L T, Samberg, H H, Paul, R E , Katz, I A, Mazur, T T (1953). Amer J Surg 85, 544.

Peatfield, R (1969). Health Trends 1, 8.

Park, W D (1969). Brit med J, i, 782.

Pollard, A Summerskill, W H J (1960). Brit med J, i, 1 71.

Powers, J H (1958). Ann N Y Acad Sci 73, 524.

Reis, E (1899). J Amer med Ass 33, 454.

Rotstein, M L (1944). J Amer med Ass 125, 838.

Ruckley, C V, MacLean, M, Smith, A N, Small, W P, Falconer, C W A (1971). Lancet, i, 177.

Scott, R, Gilmore, M (1966). Problems and Progress in Medical Care: Second Series: Nuffield Provincial Hospitals Trust: Oxford University Press.

Schafer, P W, Dragstedt, L R (1945). Surg Gynec Obstet 81: 93

Stallworthy, J A (1960). Lancet, i, 103.

Steinhart, P F (1946). Surg Gynec Obstet, 82, 348.

Stephens, F O, Dudley, H A F (1961). Lancet, i, 1042.

Stiles, H J (1909). Brit med J, ii, 754.

Strittmatter, I P (1925). Amer J Obst and Gynec, 9, 125.

Sutherland, J, Horsfall, L (1961). Lancet, i, 1044.

Swarbreck, A B (1950). Brit med J, i, 936.

Theobald, G W (1959). Brit med J, iv, 1364.

Thornton, M E, (1969). Symposium on Short Stay Surgery: Birmingham Regional Hospital Board.

Titcombe, D H M, Dootson, P H (1969). Brit med J, i 378.

Trice, E T (1947). Virginia med Mon 74, 103.

Turnbull, A C (1969). J Obst and Gynaec Brit Comm, 76, 163.

Vermeeren, J, Chamberlain, R R, Telinde, R W (1957). Obst and Gynec, 9, 139.

Wagman, H Bamford, D S (1971). Brit med J, i, 450.

Watkins, A G, Lewis-Faning, E (1944) Brit. med. J, ii, 616

Williams, J A (1969). Brit med J, i, 174.